

Vol. 2 No. 5
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ATARI CLASSICS

The Magazine for the Dedicated 8-Bit User

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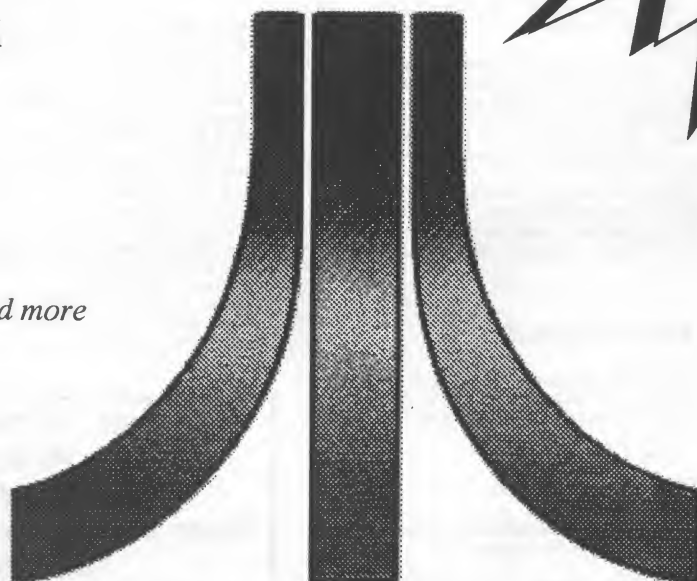
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Cycloids

...and more



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The Black Box

The Black Box is an add-on board for the Atari 600XL (upgraded), 800XL, and 130XE computers. The Black Box provides many unique and useful functions.

The RS-232 port emulates the Atari 850 interface very closely, but goes beyond by providing 19,200 baud capability. The Black Box is the only interface to support **hardware flow control**. This enables owners of high speed modems (4800 baud and up) to use their modem at full speed, and not worry about data loss due to a slow BBS or terminal program.

The parallel printer port interfaces to most all Centronics-type printers. You may assign the printer number and line feed options from within the Black Box's configuration menu. The Black Box allows **buffering** of your data, either using the extra 64K in your 130XE or the optional 64K RAM in the Black Box itself.

The hard disk port was the real reason for the design of the Black Box. You may connect most any hard disk controller that is SASI or SCSI compatible, or drives with embedded SCSI controllers. It is totally compatible with the current versions of MYDOS and SpartaDOS. The Black Box allows you to have up to 96 partitions with names, and set any partition as any drive (D1: through D9:), allowing you to place unprotected single density boot programs on your hard disk. You may also write protect ALL of your hard disks with the flip of a switch.

The Black Box also provides support for users who have previously used an ICD MIO to store data on a hard disk. You can have compatibility with an MIO formatted hard disk by simply setting a dip switch.

The 6502 monitor is very handy for machine language programmers. How often have you wondered where your program was, or what caused an apparent "lockup"? Entering the monitor will show you all the processor registers, and display the disassembly of the instruction it was about to execute when you pressed the button.

A printer dump of your current screen may be done at any time by pressing one of the buttons on the Black Box. A switch allows you to choose either text or graphics dump. (The graphics dump is only available for dot matrix printers capable of graphics.)

CSS sells a variety of accessories for your Black Box. The **Black Box Case** is a durable black plastic housing for your Black Box which sells for \$39.95. **Modem and printer cables** are available for \$9.95 each.

The Black Box sells for \$199.95 plus \$8 shipping and handling. The Black Box with a 64K printer spooler sells for \$249.95 plus \$8 shipping and handling.

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Disks formatted on the Floppy Board are accessed at parallel bus speeds, providing a **substantial** performance increase over the standard serial Atari floppy drive. In fact, Floppy Board drive access is much closer to hard drive speeds than to standard serial drives! Included with the Floppy Board is our **IBM/ST Disk Transfer Utility** program, which allows you to both read and write IBM or ST disks. This makes the Floppy Board the ideal method for porting files to and from your PC or ST!

Also available for your Floppy Board is our 1.44MB drive kit. The kit includes a high-quality 1.44MB drive mechanism, power supply, and floppy drive cable, and sells for only \$79.95 plus \$8 shipping and handling. The Floppy Board sells for \$149.95 plus \$5 shipping and handling. CSS also sells power supplies, floppy drive mechs, and custom floppy drive cables. Call for pricing.

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For a limited time, CSS is offering special pricing when you buy both the Black Box and Floppy Board. When purchased separately, you would spend \$349.90 to get these items. Our special pricing lets you have these products for only \$329, a savings of over \$20!

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The Black Box Enhancer

A must for all Black Box owners! The Black Box Enhancer is a plug-in module for your Black Box, enhancing the printer functions and adding an instantly available, full featured **sector editor**!

The built-in **screen dump to printer function** will now render a hardcopy with a 16 shade grey scale representation of the colors. A special graphics printer handler is built-in, which allows any output directed to P9: to be printed on your graphics compatible printer with the same character font used on your computer. This means all the Atari special control and graphics characters will be printed, along with inverse.

The built-in Task Master sector editor is the most powerful editor for the 8-bit. It contains a sector copier featuring multiple copies, automatic formatting, and uses all available memory for fast disk duplication. The Task Master is not limited to only floppy disks. It can handle up to 16 megabyte hard disk partitions (even in the sector copier mode)! The Task Master provides full DOS support for MYDOS, SpartaDOS, and Atari DOS derivatives. Subdirectories are fully supported! You may link through individual files by simply moving through the directory and highlighting the file you wish to edit. 16-bit and sector map linking are supported for hard disks, and 11-bit linking for floppies. It is ideal for quickly editing files and repairing damaged directories.

The Black Box Enhancer sells for \$49.95 plus \$5 shipping and handling.

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Call CSS at (716) 429-5639 between 10am and 5pm Eastern Time to order, or send your order to the address below. CSS accepts payments in cash, money order, Visa, MasterCard, or COD. Personal checks are also accepted, but shipment of your product is delayed until the check has cleared. Foreign orders must be paid in US funds.

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CORRESPONDENT'S CORNER: The Halle Expedition

by MAREK TOMCZYK, AC Staff CORRESPONDENT, GERMANY

Brave New World

For the first time in my life, I decided to cross what used to be the border of the former East Germany. My destination: Halle, halfway between Berlin and Erfurt. Starting point: Central Station in Stuttgart, southwestern Germany. A long, white InterCity Express (ICE) majestically leaves the platform, carrying me north in a comfortable seat with onboard audio programs. I soon forget about the landscape flying by at 155mph outside the window.

Now there's time to relax and look at the orange leaflet in my hands. It's an invitation for "Die 2. Atari XL/XE Messe" (2nd Atari XL/XE Fair) in Halle, on Saturday, April 3, 1993. Unbelievable! An all-Atari XL/XE fair nowadays? The invitation promises great things: a big computer and sales presentation with all major 8-bit dealers, clubs, and programmers in attendance; a game competition; an "Atari-Museum" with rare products; many oldies to buy, and last but not least you certainly won't starve there.

On the back side of the invitation is a map of Halle and its surroundings and some details on how to find the meeting place. Below the map are phone numbers for people seeking accommodations. The organizers even provided a "hot line" for people who got lost on their way to the meeting. I was impressed with the obvious amount of planning that went into this show.

My curiosity about this fair had been raised to a fever pitch as a result of all the publicity it had



AC's German Correspondent Marek Tomczyk pauses in the foyer of the Klubhaus der Waggonbauer in Halle beside posters featuring rare Atari 8-bit hardware.

received. Earlier in the year, *TOP-Magazin* and the ABBUC newsletter had announced the fair and asked for contributions to a planned demo-disk called "The Halle Project". This demo was intended to be a continuation of the old "Hobbytronic" demos. The two fairs held at Halle- including this one- were both organized by *TOP-Magazin*.

A German Safari

I had to leave the hi-tech ICE and continue my 350-mile journey on an ordinary InterCity train. As the train entered the area of Germany which had once been hidden behind the Iron Curtain, I experienced a growing sense of anxiety and anticipation. Suddenly the train began to shake and vibrate, and the scenery outside changed abruptly. I knew I was there, not only because of the bad track. The InterCity passed through wide agricultural areas and advanced slowly between the gray, shabby houses dotting the landscape of the former German Democratic Republic.

One more time I changed trains. This one was so rickety I feared it might disintegrate when I opened the door! Anyway, after almost 8 hours of jostling on the rails I decided to stop over in Weimar, home town of the great poet Johann Goethe. Next day I continued my trip by car. The remaining 100 miles went fairly smoothly when I finally arrived in Halle. The parking lot adjacent to the meeting place promised lots of visitors from all over the country.

The Fair At Last!

As I entered the "Klubhaus der Waggonbauer" where the fair was being held, I was pleasantly surprised to see that entry to the fair was free. I went in and... WOW!!! An entire hall full of 8-bit Ataris, lots of people crowded around booths, a cacophony of sound emanating from various XL/XEs showing demos, people chatting and haggling. I paused at the entrance to survey the meeting area.



Some of the Halle festgoers in action. Barely visible on the table at the extreme right of the photo is a copy of AC.

The whole place was about the size of a gymnasium with stalls along the walls leaving an open space in the middle for all the 8-bit devotees. Unable to decide what to see first, I just mingled with the crowd. The first thing I noticed about this fair was that people weren't just walking and talking. Sometimes lively discussions arose spontaneously, very often resulting in people exchanging addresses for future contacts.

8-Bit Warmups

The first stall I came to belonged to the "TOP-Crew", the fair organizers. They were hard at work showing and selling the "Halle Project" demo-disk. Just the right subject to start a conversation! Parts of the demo were being written right there at the show, and they didn't mind people plying them with questions about tricky machine language programming. It turned out that many programmers devoted to demo programming were using a relatively new (Shareware) Assembler by Torsten Karwoth supporting more than 64K RAM. Another product sold at this stall was of course the 8-bit *TOP-Magazin*, a disk-based magazine published by the "TOP-Crew".

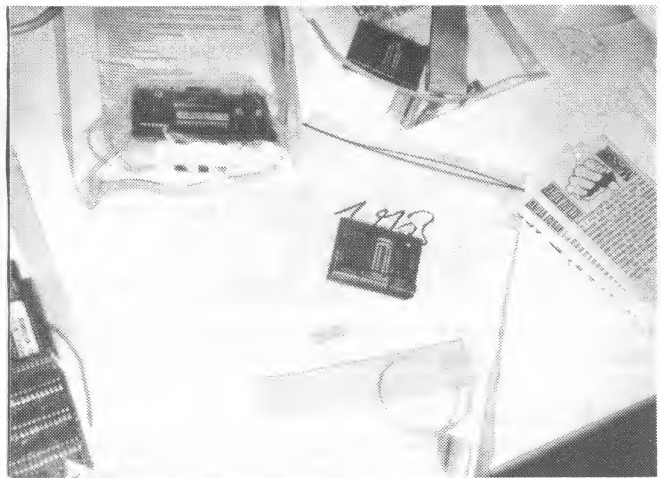
I moved on to other booths. On the left near the entrance, a PD/Shareware distributor opened his business. He was either very successful or not well-prepared for the show: by 11AM he was out of blank disks!

Hardware Wonderland

Next to the diskless PD vendor was perhaps the most interesting booth at the show. Klaus Peters and Co. presented a mix of new and existing products with an emphasis on hardware. In revision III already, the 1-meg memory upgrade with 10-bit hardware refresh and two 4-megabit DRAMs offered huge memory on a tiny, professional PCB. If you got bored with RAM upgrades you could check out Klaus's ROM upgrade. His 512K ROMdisk allows you to access your favorite software burned on EPROMs. The ROMdisk plugs into the PBI, and even lets you boot from it. Of course, a ROMdisk is rather useless if you don't have the means to burn your own EPROMs. Not to worry, Klaus was happy to sell you his "Burner XL/XE" which connects to the cartridge port and burns EPROM types up to 27512's.



Representatives at the Klaus Peters Elektronik+Software booth demonstrate the latest hardware upgrades.

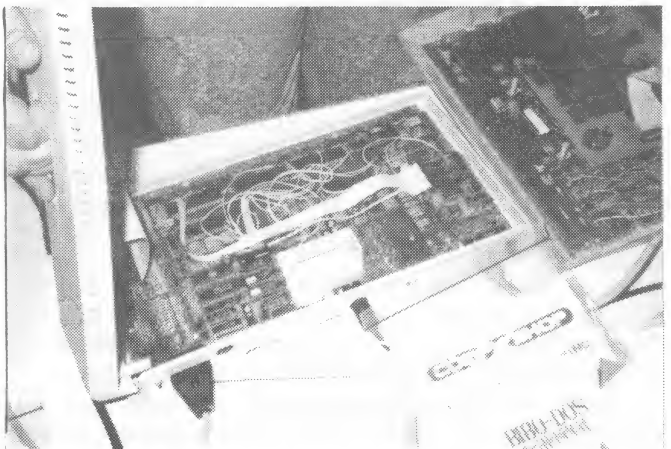


Goodies from Klaus Peters. In the center is the Peters "MegaRAM" 1-meg upgrade board using just two 4-meg DRAMs. In the upper left is the 25K Bibomon upgrade OS replacement. Partly cut off in the lower left is the 512K ROMdisk. Yum, yum!

Another interesting hardware upgrade from Klaus Peters is the 25K Bibomon. It has an onboard M/L monitor, a simple assembler, a sector editor, various DOS functions and lots more. Besides the supplied modified XL/XE OS it also allows you to use the old 400/800 OS. There's even a space on the PCB where you can plug in two additional OS's of your choice. The OS's and other functions are accessed via a colorful menu.

Atari doesn't produce the XF551 any more, but Klaus sells a substitute for it: the "Floppy 2000". This double sided, double density 5.25" drive connects to the SIO just like other Atari peripherals. It comes in a gray slimline case with a built-in speed enhancer and the ability to reprogram the drive to a certain extent.

It wasn't all hardware, Klaus had software as well. "Sprint XL", a DTP program for the 8-bit, is roughly comparable with "Daisy Dot". "Sprint XL" uses character sets "E24" in the SIGNUM format (SIGNUM is a DTP program for the Atari ST). It lets you incorporate graphics in your text and supports formats from the common 62-sector Gr. 8 pictures to the ART format used on PC's. I chatted with several people who used both "Sprint XL" and DD3. Some liked DD3 better than "Sprint XL" while others claimed just the op-



The Peters MegaRAM installed in an 800XL.



AC meets ABBUC. ABBUC's President Wolfgang Burger (right) with AC's representative Marek Tomczyk (left).

posite. Klaus was selling some older software, too. Mainly games like "F-15" and "Guild of Thieves".

The Show Goes On

The next booth was Kemal Ezcan with his company called KE-Soft. This company is based around the 8-bit magazine *ZONG*. Besides this bimonthly magazine he sells a bunch of games including his own productions as well as imports from Poland and the U.S. Action! could be yours for 289DM while M.U.L.E. went for 79DM. *[Editor's Note: the German Deutschmark (DM) is worth roughly US\$0.60, or about 3DM to the British pound sterling. Assuming I've done the currency conversion correctly, these prices would be considered outrageous in the U.S. -BP]* KE-Soft conducted the announced game competition for kids. The challenge was to solve an adventure game controlled by a touch tablet.

Adjacent to KE-Soft, the all 8-bit usergroup ABBUC (Atari Bit Byters User Club) offered membership info for those wishing to add their names to its 750 members worldwide. Visitors could play with a video digitizer they had connected to a video camera through the cartridge port of an 800XL. The Atari displayed about three GRAPHICS 8 pictures per second, which was amazing. Anyone could freeze the desired picture and save it to his disk.

On the other side of the hall another user club from Bremen (northern Germany) was selling reconditioned hardware and old software items. You could spot some small hardware hacks as well, especially a "Lightshow" with an array of LEDs.

Halle Goes International!

It was true. Alphasys from Holland found their way to Halle, too! Besides the usual software, they offered a 130XE built into a huge tower case. This beast had a second POKEY for playing music in stereo. The Alphasys guys promised new sound digitizing software to support expanded RAM and simplify sound mixing. Alphasys' tower XE was really a showpiece: equipped with numerous LEDs and switches, a 1050 with the Speedy upgrade and a speed display just for fun. On another table they had a C.S.S. Black Box from the U.S. connected to a hard drive. This was a real eye-catcher for many fairgoers, as the BB is rather rare in Europe.

Adjacent to Alphasys was Markus Roessner and his company selling a huge variety of games from Poland, Germany and the U.S. as well as some disk magazines like *MegaMagazine* and *ZONG*.

The next booth hosted some very young and skilled programmers of "W.A.F.", the "Wuerzburger Atari

Front". W.A.F. is a regional group of ABBUC known for some excellent demos in the past. They showed their part of the "Halle Project" demo and just represented their Club.

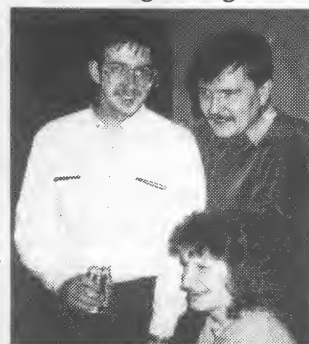
That's also what their neighbors did, i.e. another regional division of ABBUC. They came from Osnabrueck and demonstrated their OS replacement called SPOS. SPOS is a single EPROM with a new OS on it. For 39DM it offers massive RAMdisk support allowing you to boot from the RAMdisk. A special keypress brings you to a menu where you can choose SPOS's functions. This group's table held another interesting device not seen in the U.S.: the HDI. HDI is a stand-alone 3.5" 1.44MB disk drive connected to the standard SIO. It was developed by a member of ABBUC whose name has now regrettably slipped my memory. During the show the HDI ran under MyDOS and served as an archive for various demos. It has a cable allowing you to connect additional standard 3.5" slave drives.

Overview

The Halle fair was a great success, with about 300 8-bit aficionados attending this one-day event (more than last year). I asked the organizers how they came out financially. They didn't answer directly but indicated they at least managed to break even. One part of their income derived from sales of the "Halle Project" demo disks, with a boost from food sales (they offered the famous "Thueringer Bratwurst"). Their strategy appeared successful. The Halle fair really has become a replacement for the former "Hobbytronic" fair, which became desolate over the last few years and is no longer relevant for Atari 8-bit users.

This fair was just the opposite. Despite the fact that none but insiders deal with our beloved 8-bits these days, the fair managed to attract a growing number of visitors. I'm sure everyone will cherish a fond memory of this Saturday, which was far more than a commercial presentation.

I really hope this fair will continue in years to come; maybe it could become even more international since now you all know about it! Auf wiedersehen!



Wolfgang Burger and members of ABBUC relax after a successful day in Halle.



A member of the Osnabrueck Regionalgruppe of ABBUC explains the SPOS to Marek. In the foreground at bottom center is the HDI 1.44-meg SIO floppy drive with case removed for demonstration.



The Fitting Room

THINGS THAT GO KABOOM IN THE NIGHT



Mike Jewison, AC Staff Columnist

What Goes Around Comes Around

Way back in the first issue of *ACI* discussed this (sometimes) annoying habit I have of never throwing anything away. Our illustrious Managing Editor has referred to this trait as some sort of "Packrat Syndrome". I tend to oppose that description, however, as I think of packrats as people who *never* throw anything away; I, at least, try to purge my file folders at least once a decade. I like to think of myself as more of a... ummm... collector. Yah, that's it, a collector.

Since I became involved in the now infamous mail-in campaign which begot *AC*, I've discovered an even more insidious side to this habit I have of, uh, collecting things. Something so evil that it enables you to hoard volumes without recognizing that you're actually doing it. Something that allows you to stuff note after note into a variety of folders and not take up any physical space. Something which lets you keep hundreds of messages, megabytes of correspondence, at your fingertips. Yup, you guessed it: email!

Now, don't get me wrong, I love email. I use it daily to correspond with both business associates and friends. The problem is that I often have difficulty in letting go; I rarely delete email messages of a personal nature. This has, needless to say, resulted in some pretty large mail folders on my computer at work. I never have a problem with exceeding my disk quota, mind you. As System Manager I can give myself as much disk space as I need. Or want.

E-Mail Nostalgia

Every so often I'll get nostalgic, browse through a number of mail folders and reread what's there. Awhile back I ran across the following from our good friend, the 8-Bit Alchemist:

... I was thinking how uncanny it is that your habits/experiences resemble mine:

- you're a packrat: you hate to throw stuff away, even phone bills from 10 years ago (hey, Packrats Unite!).

- after the novelty of a new toy wears off, you then can't resist the urge to start tinkering with it (ah, a man to warm the cold heart of an Alchemist!)...

Well, I don't consider myself as being quite up to the lofty status of an Alchemist, but the fact that one of their ilk can understand my motivations is

enough to give me a warm, fuzzy feeling inside. *[Editor's Note: not everyone thinks of The Alchemist as "lofty". There are a few people who consider him a pain in the neck, since he's always finding bugs in everything and is never satisfied, that bony-fingered old goat. Ugly, too! -BP]*

By now, you're probably wondering what all this has to do with this month's column. Me too. Actually, the truth of the matter is that the novelty of all this nifty hardware I've collected over the past little while has worn off, and I'm unable to resist the urge to start tinkering with it.

RAMDisk Go Bye-Bye

Over the past year I've regaled you with stories on the many upgrades I've made to my 800XL: TransKey, SIO2PC, a cheap 256K memory upgrade, the UltraSpeed+ OS, and a Black Box/Floppy Board combination. One thing that always bothered me has to do with the US+ and my TransKey adapter. For those of you who are unfamiliar with them, the TransKey is a board (from DataQue Software) which enables you to connect an IBM-PC style keyboard to any 8-bit Atari computer. This is the only keyboard I have for my computer; when I purchased the 800XL I bought only the motherboard- no case, no keyboard. The US+ is a replacement OS for the XL/XE computers and is available from Computer Software Services. I've talked about both of these items at great length in previous columns.

One feature of the US+ is the ability to perform a cold boot of the computer without having to power it down. The saving grace of this is that any contents of your RAMdisk won't be lost if your program crashes. To activate this all you need do is hold down the HELP key while you hit RESET. Because I have no stock keyboard for my 800XL I can't do this. All is not lost, though, because the TransKey firmware can emulate a HELP-RESET by a CTRL-F5-DELETE with the PC keyboard. Unfortunately for me, I've never been able to get the CTRL-F5-DELETE to work properly. If my computer crashes, I always end up having to cycle the power. And of course my RAMdisk contents go POOF! No fun at all!

Deep Freeze

Some time ago, our Moonlight Workshop columnist Jeff McWilliams told me about an enhancement to the TransKey called TKFreeze (which I'll refer to

as TKF). TKF is a small homebuilt add-on board which gives you additional control over your computer. It was the brainchild of Michael St. Pierre, the fellow who originally developed TransKey. I retrieved it as an ARC file from the Atari 8-Bit Roundtable on GEnie (#5447 in Library 2), and although I haven't checked it might be available on some of the other online services. There's also an addendum file (#5495) which apparently fixes the TKF circuit for use with XE computers. I haven't actually downloaded this myself.

The ARC file contains two pages of documentation on the theory behind the operation of TKF as well as a circuit diagram and notes on construction. The heart of the TKF is a 4070B CMOS quad XOR gate with buffered outputs, one of which is tied into the GTIA. I won't get into a nuts and bolts description of the circuit; the documentation explains that far better than I.

The TKF boasts two features. The first is a boot delay which can be adjusted anywhere from 0 to 20 seconds. If you have your computer mounted inside a PC case, as I have, and are using a hard drive with everything connected to the PC power supply, increasing the boot delay time will allow your hard drive to spin up before the computer is powered on, thereby eliminating boot errors. The second feature is a special "Freeze-Reset" which is enabled by the SHIFT-ESCAPE-DELETE function of the TransKey. The Freeze-Reset fools the computer into performing a cold boot, again preserving RAMdisk contents. I thought both of these features were extremely useful, so I quickly began the job of collecting the necessary components as outlined in the documentation.

[At this point I have to insert the customary disclaimer that this project shouldn't be attempted by someone who is all thumbs with a soldering iron. Any damage to your computer as a result of this installation is your own responsibility, and besides, you'll most certainly void the warranty on your computer (as if any of us have warranties remaining!).]

Flame On

The question burning in my mind was how best to install the TKF inside the PC case which houses my 800XL motherboard. There's so much stuff crammed in there already the last thing I wanted was another loose board with a bunch of jumpers between it and the motherboard. The answer was provided by my TransKey. It has a small daughterboard which plugs directly into the POKEY socket into which you then plug the POKEY chip. I always thought that was a neat way of doing things, so I decided to construct my TKF in the same manner. Since the TKF makes use of several connections on the GTIA I decided to build it on a small printed circuit board, plug that board into the GTIA socket, and then stick the GTIA into the TKF board.

For the circuit board I selected a small general

purpose Radio Shack IC board (#276-150). I cannibalized a couple of Augat chip sockets to remove the pins and soldered them in two rows of 20 on the IC board to hold the GTIA. Since the holes on the IC board were slightly too small for the pins, I had to use a small drill to enlarge them. The pins protrude well below the underside of the board giving plenty of clearance between it and the motherboard.

I then installed a socket for the 4070 as well as the rest of the components on the TKF circuit board. The +5V and ground signals on the TKF board are taken from pins on the GTIA. Once I'd finished the soldering, I checked and rechecked my wiring, plugged the GTIA into the TKF board, wired in the jumpers between the TKF, TransKey, and 800XL, stuck the TKF board into the GTIA socket and powered everything up.

Solid gold. That's not how it performed, that was the color on my monitor screen. I knew power was getting to the computer since the CAPS LOCK light on my PC keyboard was blazing away, but all the monitor showed was this very pretty gold color. I sighed deeply, powered the computer down, and checked everything on the TKF board: GTIA, empty 14-pin socket, external connections, everything OK-wups! Hey, wait a minute- *empty* 14-pin socket? Ah, stupid me, I'd forgotten to install the 4070. So I stuck the 4070 into its socket and powered the XL up again. Within a second, I saw a red flash from the underside of my TKF board and got a faint whiff of that acrid smell which tells you: BURNING CIRCUITS!

Uh-oh.

I never moved as fast in my life as I did when I hit the switch to cut power to the computer. With tears in my eyes, I pulled the TKF from the XL, reconfigured the GTIA as it had been before and tested the XL. I was lucky- there was no apparent damage to the XL- at least none I've been able to detect so far.

Video Toast

My TKF board, however, was another story. The red flash I observed was due to one of the copper traces on the PC board going poof. The trace happened to be the +5V bus. There was close to an inch of the trace which had been blown completely off the board. What happened? Basically it comes down to faulty design and sheer user stupidity. [Dear me, this fellow is really hard on himself. -Ed.]

When I built the TKF board, many of the components (including the socket for the 4070) were positioned above several small ICs located just to the rear of the GTIA. It appears that when I inserted the 4070 into its socket on the TKF board I pushed the board hard enough to cause one or more solder joints on the underside of the TKF board to come into contact with one or more pins on the chips near the GTIA, creating a short. That was the fault.

ty design; I should have built the board such that the components were positioned over the empty space to the left and front of the GTIA. The stupid part was that although I must have checked the circuit a dozen times before installing the board I somehow reversed the +5V and ground buses. Little wonder the whole thing went kablooe; the really amazing part was that nothing else was damaged.

I was back to Square One. I redesigned the board, and in the process ended up with a much cleaner circuit than the original; fewer jumpers and far fewer crossed wires. This time, construction and installation went flawlessly. I even remembered to install the 4070. I flipped on the power supply in the PC case, and after an anxious 8-second wait the computer jumped to life.

The user delay circuit on the TKF is adjustable with a trim pot on the board. I adjusted the delay down to about two seconds. This gives the IBM keyboard I'm using with the TransKey time to go through its power-on self test (POST) before the computer comes up. This allows me to hold down OPTION to disable BASIC or, if I wanted to, I could even load a boot tape by holding down START. You can't easily do either of these with a standard TransKey installation.

Coordinating Accessories

Going back to our first issue yet again, I originally described the Fitting Room as a place in which you and I would have our computers try various items on for size, just as we might in a clothing store. One of the most important aspects of a clothing purchase (at least, so I'm told by my wife) is the coordinating of accessories. We're going to do a little of that here.

I have a Black Box (also from Computer Software Services) which resides with my 800XL motherboard inside an old flip-top style IBM PC/AT case. My Technika MJ-10 monitor sits atop the case, making it a tedious chore to open the case if I want to get at something inside. The Black Box (BB) sports two pushbuttons: one brings up the BB menu, the other dumps contents of screen RAM to your printer. The problem is obvious, isn't it? If I want to get into the BB menu, I've got to move the monitor, flip open the case, press the button, close the case, and replace the monitor. Ugh! It turns out the TransKey firmware can greatly simplify this procedure.

The TransKey documentation (V2.0) describes a number of special keys and how to implement them. By wiring pin #1 of J3 on the TransKey main board to the center terminal of the BB menu pushbutton, you can enter the BB menu by pressing CTRL-SHIFT-5 (on the NumPad). By similarly connecting pin #2 of J3 to the center terminal of the BB screen dump pushbutton you can send the screen contents to the printer by pressing CTRL-PRINT SCREEN. Excited by the prospects of having access to these

BB functions from the keyboard, I wired a couple of jumpers into place. I used a small 2-pin molex plug to connect the jumpers between the BB and TransKey just in case I want to remove either for some reason; I won't need to break out the soldering iron.

Both functions work exquisitely. I've since closed up the PC case and plopped the monitor back on top. The only time I need to go inside the case now is to work on another hack.

What's Up, Docs?

The only nit I have to pick about this deals with the TransKey documentation. When I purchased my TransKey roughly two years ago, I received an older copy of the docs which didn't mention either of these useful functions. This was right around the time when DataQue Software purchased the rights to TransKey from MicroSolutions, and there was a note in my docs bemoaning some files "lost" in the transfer. I hope Chuck Steinman of DataQue has had an opportunity to upgrade the TransKey docs. It would be a shame if other TransKey users weren't aware of some of the powerful features it offers.

That pretty much wraps things up for this month. Next time we're going to get away from hardware and try out some software for a change. See you then!



JINXED!

In the August '93 AC we published a correction to the address for ZTM Software Manufacturers (p. 23). We got ZTM's New Jersey zipcode right but then somehow managed to mistakenly displace ZTM to the state of New York. So, here's ZTM's correct address, for real this time, we promise:

ZTM Software Manufacturers
P.O. Box 240
Forked River, NJ 08731 USA
Phone: 609-971-5807

Give us a few years, we're bound to get it right sooner or later!



Audio Bypass

UPGRADE FOR THE XL/XE

Birth of The Alchemist

In 1983 I read a book called *The New Alchemists* (by Dirk Hanson; Little, Brown & Co., 1982, now out of print) in which I first glimpsed a philosophical perspective for my tekkie interests. In one of the most spellbinding narratives I've ever read, Hanson describes how the modern science of microelectronics (the "New Alchemy") was founded upon scientific discoveries in chemistry, physics, and mathematics in the late 19th century. From the strange adventures of Edison, Babbage, and Tesla, Hanson weaves a tale that works up to the glory days of Silicon Valley- including the founding of Atari by Nolan Bushnell and the startup of Apple Computer by an ex-Atari employee named Steve Jobs.

Given that my work involves equal measures of voodoo and sophisticated science, I've always felt a certain kinship to the alchemists of old (one wall of AC's editorial offices is adorned with a quote from the great German alchemist Johann Joachim Becher who lived in the 1600's). Along comes this guy Hanson who proclaims my hobby to be a new form of alchemy. And of course, I'm a sworn 8-bitter. There you have it: The 8-Bit Alchemist. The logic is inescapable.

Although I had submitted several articles to *Current Notes* magazine in early 1990, in September of that year I was officially recognized as that magazine's 8-Bit Editor with the publication of the first installment of my column titled "The 8-Bit Alchemist". Those of you who subscribed to *CN* back then will recognize my familiar logo. I'm very grateful to Joe Waters at *Current Notes* for allowing me to use my old logo in this magazine. I departed *CN* in January 1992 following a fire which severely damaged my home in late 1991. (I wish I could say the fire was caused by something honorable, like a 300-watt audio amp blowing up. Instead, it was something stupid: sloppy masonry work in my fireplace started a fire inside the wall.) During the hiatus imposed by repairs to my house, I got caught up in the Mail Campaign begun by Jeff McWilliams to start this magazine. The rest, as they say, is history.

Ever since the founding of *AC*, the Alchemist in me has been at odds with my roles as Managing Editor and Circulation Editor. At long last the Editors in me succumbed to the Alchemist, casting aside the pen in favor of the soldering iron. Nearly two years of pent-up frustration was suddenly cut loose, and The 8-Bit Alchemist went on a mouth-frothing binge of hardware hacking. These labors yielded a rich harvest of hardware info and improvements which I hope to present in future issues. For the present I'll content myself with showing you a neat little hack that improves audio in the XL/XE machines. It's altogether fitting that the

Multiple Personality Syndrome

Welcome to an occasional column by your Managing Editor, whose secret ambition since 1984 has been to have some kind of Atari 8-bit magazine dedicated to hardware hackers. I had hoped *ComputerSmyth* would be such a publication when I first began publishing there in 1986, but alas!, that magazine went belly-up in 1988. I now know there will never be a "hacker's journal" as such. But we have *AC*, so maybe there's still hope for those of us with a passion for tinkering. Or, in my case, for improving things.

There may be some among you who think I get off on being "Mr. Managing Editor". The fact is, I hate it. My emotional constitution was never made for being the "Manager" of anything. There are now about 25 people involved with this publication in one way or another, and keeping tabs on everyone is extremely stressful for a fellow as ungregarious as me. I do the Editor Thing because I sort of fell into it. But give me something that captures my fancy and I'll drag it off to my own quiet corner, far from the madding crowd. And that "quiet corner" is packed with all kinds of scientific toys.

In real life I'm a research chemist. I work for one of the world's largest pharmaceutical companies, and my specialty is natural products chemistry. If you saw the movie "Medicine Man", you have the Hollywood version of what I do for a living (Sean Connery makes everything look easy!). Basically, my job is to look for new medicines in sources from Nature: mostly exotic plants, microbial fermentations, or slimy dead things from the ocean. Although I get involved with hi-tech stuff like reversed-phase high pressure liquid chromatography and gated spin-echo nuclear magnetic resonance, it isn't as glamorous as Hollywood makes it out to be: some of the stuff I work with would make a billygoat puke. And the daily environment I inhabit in a corporate chemistry lab is about as far as you can get from the congested serenity of *AC*'s Editorial Offices.

My hobby is electronics. I was- and still am- an audio freak. The subject of psychoacoustics never fails to fascinate me, and I have an ongoing love affair with monster power amplifiers. During the 1980's I achieved the status of a minor guru by publishing a number of articles in audio electronics. These papers, along with a dozen or so contributions to professional scientific journals, constituted my rites of passage in the publishing world. Nearly all those articles were written on the same trusty 800XL I'm using to compose this article right now.

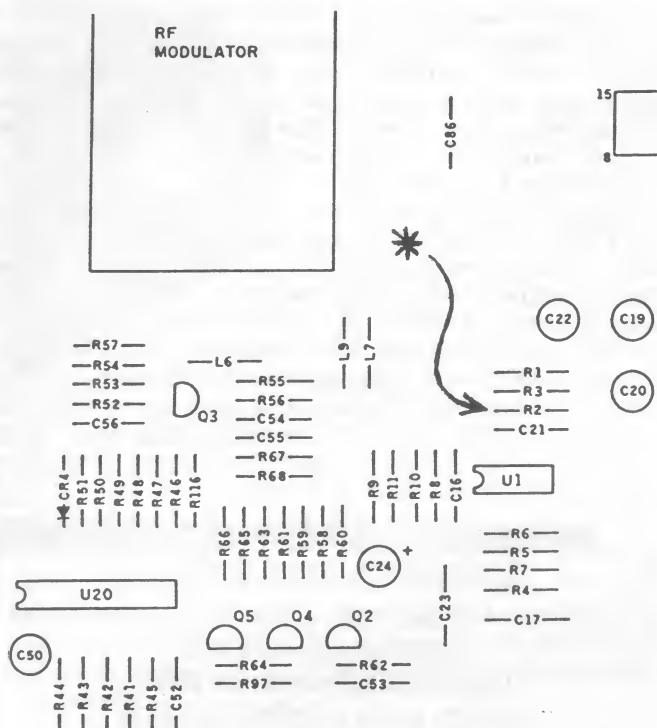


Figure 1. R2 location in the 800XL.

first hack presented by The 8-Bit Alchemist in *AC* has to do with audio.

Treble Serendipity

Rarely do I get a chance to present a hack that does two good things at once and is almost absurdly simple to perform. Most hardware hacks are difficult to do and require lots of soldering skill. Not this one. The hardest part of this hack is just getting your computer open without wrecking its innards. I'll diverge for a moment to describe how I stumbled on this hack.

Several of my 800XL machines, especially one that contains Chuck Steinman's GUMBY upgrade, seem to put out various levels of annoying background noise that varies considerably from machine to machine. The noise is on the SIO audio line and is easily audible on my monitor speaker. It's composed of a hash of low-level squarewaves inhabiting the lower 8 octaves of the audio spectrum. I'd characterize it as a raspy, buzzsaw kind of sound. After 15 minutes of this I suddenly feel a vague urge to kill something. Sound familiar?

I pulled out my 800XL schematics, popped the hood on my 800XL, scooped up a handful of capacitors, and got down to it. Initially it was my intention to hang a filter cap across the offending audio line. This didn't work so well. I quickly found that capacitance values large enough to suppress the noise also suppressed most of the legitimate audio signal. Throwing out the baby with the bathwater isn't my style, so I kept looking.

Audio in the 600/800XL (but not the 1200XL), and in the XE machines, is handled by a garden-variety LM358 dual op-amp chip. It seemed to me the noise

was being generated by instability in the op-amp circuit. In the XL/XE machines, the layout of the audio circuit almost guarantees you'll have some noise, due to the messy array of inputs and outputs which contribute a lot of stray capacitance to the high impedance inputs of the op-amps. The usual way to tame op-amp instability is to bypass the feedback resistor with a small value capacitor to prevent RF oscillation. I tried this in both halves of the op-amp circuit, with disappointing results.

OK, I knew I had to stick some capacitance in there *somewhere*. If feedback bypassing didn't work, how about a feedforward bypass? There are two 2000-ohm coupling resistors in the 800XL op-amp circuit: R2 and R7. I tried my capacitor bypass on R7 first. That was the wrong one, it trashed the sound. So I tried bypassing R2 with my capacitor. That worked. The annoying background buzzies died down considerably.

I got a pleasant surprise when I played some music through the modified circuit: not only was the background noise level much lower, but the treble tones got a nice little boost! I ran the audio self-test routines while listening to the output through the speaker in a Commodore 1902 monitor as I alternately connected and disconnected my bypass capacitor. Yup, I wasn't hearing things. The extra sparkle in the treble was plainly audible, and most welcome. I suddenly realized how dull the audio on a stock 800XL really was.

Doing The Mod

You'll need a 0.1uF capacitor, preferably a mylar type but any non-polarized cap will do. Don't worry about the voltage rating on this capacitor, it doesn't matter. Even if you buy this cap at your local rip-off Radio Shack, you'll get by for well under a dollar. Trim the leads on the cap to about 1/4-inch, and solder it across the appropriate 2000-ohm (red-black-red-gold) resistor on the component side of the board. In the 800XL and 130XE, this resistor is designated R2. In the 600XL, it's designated R111. You folks with 65XE's will have to be on your own for this upgrade, as I don't have either a 65XE or diagrams for one. I'd be

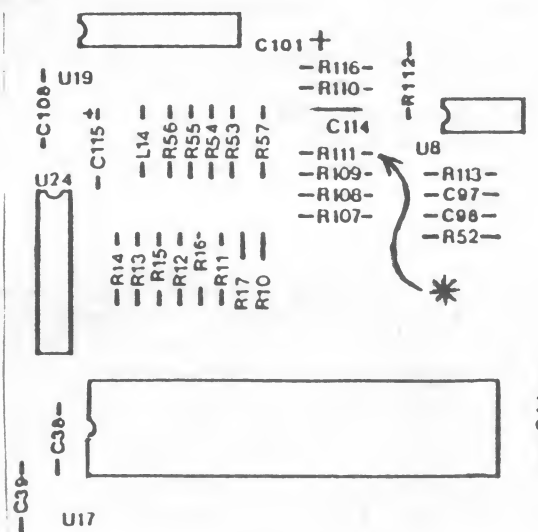


Figure 2. R111 location in the 600XL.

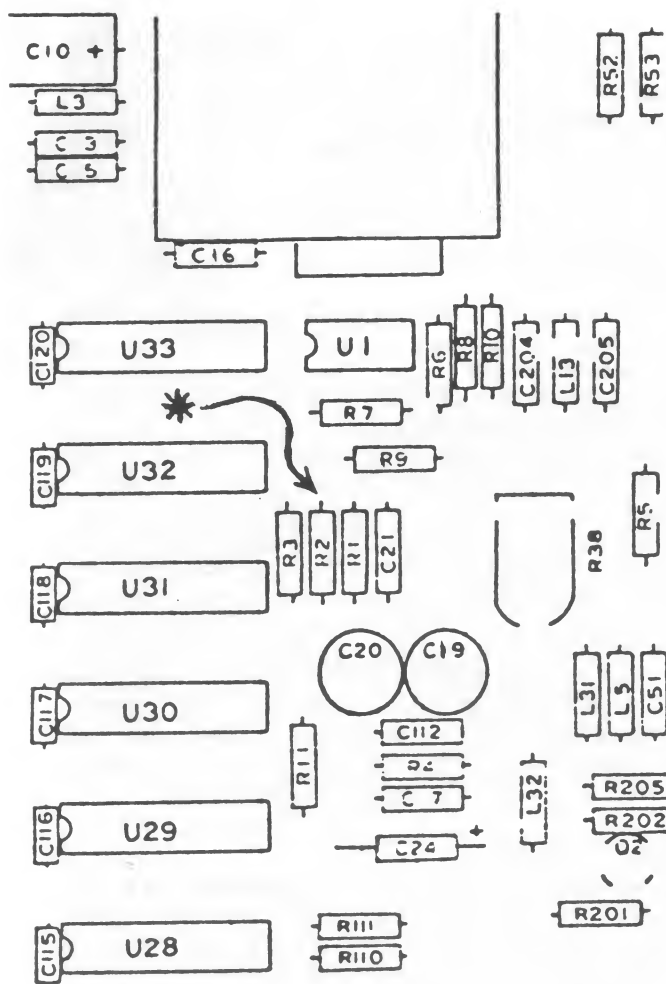


Figure 3. R2 location in the 130XE.

willing to bet the appropriate resistor in the 65XE is designated R2, if you can find it. (If anyone tries it on a 65XE, write in and let us know!) Use the diagrams to locate the proper resistor in your machine.

I haven't done this upgrade in my 130XE, but I performed it on an 800XL and a 600XL with satisfactory results on both machines. Even if you don't have a noisy audio line, you might want to add the audio bypass capacitor anyway just to get the enhanced treble response. Try it, you'll like it!

OK, so much for audio. What about video? Atari butchered the video in all the 8-bits, especially the XL machines. Can we fix it? Heh, heh. Stay tuned, folks, The Alchemist is cooking...

Postscripts

In the August *ACI* grumbled and snarled about being tied to Radio Shack for label stock for the venerable 1025 printer I use to crank out all those mailing labels for this magazine. While I appreciate the various exotic suggestions I received from several readers, I'm happy to say I've since found an alternate source for 1025 labels, considerably cheaper than the Rip-off Shack. They're available from MISCO (1 Misco Plaza, Holmdel, NJ 07733; phone orders 1-800-876-4726) item #GD8695, \$10.99 plus shpg. per box of 2000 in lots of 3 or more (\$30 minimum order).

Also in the August *ACI*, I reported I had been negotiating

with MicroMiser Software to obtain rights to *TurboFile*, with the intention of making it available to the market once again. Sadly, I must now report those negotiations were a failure, and it looks like the most powerful database ever written for our machines is on its way to the dustbin of oblivion. The Alchemist learned an unhappy lesson and will henceforth stick to the things he knows best.

In an "Editor's Note" in the August *ACI* mentioned that my 1088K Newell RAM upgrade was "still flaky". Editors may not know much about malfunctioning RAM upgrades, but Alchemists do (oh gosh, keeping track of these multiple personalities is confusing!). Suffice it to say things quickly got put right when The Alchemist took over, and now my 1088K 800XL is performing smartly. Having 128K of XE memory plus a 960K RAMdisk is pure heaven for Editors who have to ARC up 200K of text files at a shot. So then, shall we see an article on the Alchemist's adventures in Newell Mega-land? All in good time.

Evangelo's Atari Software

The largest 16- & 8-bit dealer in New Jersey is having their limited software clearance!

Commerical software as low as \$3,
but hurry, supply is limited! Send \$2 for
16- or 8-bit listing, refundable upon order to:

Angelo V
27 Stiles St.
Elizabeth, NJ 07208
Phone: (908) 558-9518

DEAN GARRAGHTY - ATARI 8-BIT SUPPORT

Digi-Studio Price Decrease!

In order to show our continuing commitment to producing Atari 8-bit software, we have been able to reduce the price of Digi-Studio (the digitized sounds and music utility) down from \$31.45 to just \$15, which includes shipping.

This new low price doesn't mean you get less software! Everything included with the package at the old price is included for the new price! It's exactly the same package, but at less than half price!

Digi-Studio is a music creation system, but for digitized sounds! You can play these sounds using your keyboard like a piano keyboard, or create a programmed tune using the special LIDS language. You can also edit digitized sounds using the sound editor, and you can even merge digitized tunes into your own Basic programs!

Digi-Studio is supplied with a 44 page manual, and 2 DS/SD disks. It will only run on XL/XE machines, and not the old 800. As well as the programs mentioned above, you also get 55 sound samples, and 47 ready-to-play tunes supplied. Get your copy today in the US from:

Lance Tatman, 844 Kern Street, RICHMOND, CA 94805

In the UK the price is £7, including P&P. Price to EEC countries: £10, including Air Mail. Foreign orders pay in UK pounds in cash, or send an IMO. Orders to:

Dean Garraghty, 62 Thomson Ave, Balby, Doncaster. DN4 0NU, ENGLAND.

Other Atari Products

We also produce the Atari 8-bit News-Disk, an on-disk newsletter for the Atari. We have produced 12 issues of this so far. These can be bought direct from us in the UK as a back issues pack for \$22 (UK price: £6.50, EEC price: £8). We accept payment in US\$ in cash.

We also have an extensive PD library, with 166 disks currently available. These can cost as little as \$2.50 a disk! Send \$5 for the on-disk catalogue, or get a free catalogue when you buy the News-Disk back issues pack! All US payments should be made in cash in US\$. If sending large amounts of cash, you may want to take out insurance on the letter with the Post Office.

We also sell most PPP products in the UK, including: QUICK, SAM, QUICK Ed, Rubber Ball, Gaggas It!, and Minesweeper. These are also available in the US from Lance Tatman.

AC Software Disk Index

OCTOBER 1993

by STEVE HOFFEE, AC Disk Editor

Well, here it is, the last disk rounding out our first year of publication. We hope you've enjoyed our magazines and disks as much as we've enjoyed sharing them with you. As an exclusive 8-bit publication, it's been an inspiration working with such a unified 8-bit user community; our hats are off to you! Without you—the users, programmers, and subscribers, we would not be here today or in the future. As of this writing about 60% of you are subscribing to the AC Disk, which is about triple what we expected a year ago! We have a feature packed disk full of top notch programs this month and lots of excellent programs for our future software disks (so don't forget to renew your subscription!!).

Now, down to the meat and potatoes of this article. We have a brand new menu created by Earl (Clay) C. Halliwell from N.W.P.A.C. We think you'll agree this menu greatly enhances your enjoyment of the software. You'll find the following programs on the AC October Software Disk:

Side A

CYCLOIDS—A hi-tech Spirograph (tm) in BASIC for your 8-bit, by Tom Andrews. (AC, OCTOBER '93)

DESKJET—BASIC demo for using the Hewlett Packard DeskJet 500 printer with your 8-bit, by Frank Kweder. (AC, AUGUST '93)

MORTGAGE—a quick and easy BASIC mortgage payment planner to help you decide if you should refinance your home in today's low-interest market, by Amy Krohn from the March 1985 *ANALOG*, modified by The 8-Bit Alchemist for clarity. Self-prompting, self-explanatory to anyone familiar with mortgage jargon.

RED HOT POKER—A neat BASIC program that lets you POKE in some useful features, in AtariBASIC (.BAS), LISTable (.LST), and binary (.COM) versions, by Russ Gilbert, including docs. [Note: After the October Disk was already in duplication and just as this issue of AC was going to press, we received word from Russ of a minor correction to the docs. Near the end of the text where it says 559 is in DOS, change that to read 710. —BP]

THE SOUND GENERATOR AND UTILITIES—This great little BASIC program lets you listen to the sounds as well as list them to be added to your own programs (author unknown).

THE GENESIS PROJECT DEMO—A great M/L 3-D demo of a rotating mask ported from Commodore by Stephen Logie and Robert Stuart.

Side B

MENU DOCUMENTATION—A complete documentation file that explains the basic setup for AC's new menu (DOMMenu), originally designed for use by usergroup Disk Of the Month librarians, by Earl C. Halliwell.

COLORVIEW 2.6—If you liked Jeff's earlier version of Colorview you'll love this one. It's packed with features and includes a slide show for viewing all the picture files on the disk, with complete documentation. Shareware by AC's own Graphics and Entertainment Software Editor, Jeff Potter. (AC, JUNE '93)

RAMDISK UTILITY FOR 256K UPGRADE—A neat little utility for DOS 2.0 or 2.5 that lets you set up two single density RAMdisks on a 256K upgraded 8-bit. Exact author unknown, seems to have originated from the MAAUG BBS in Madison, Wisconsin (USA).

ATARIWRITER-80 AUXILIARY MENU—Jeff McWilliams' nifty M/L utility for AtariWriter-80 fans who'd like to exit to DOS or look at directories of D1: through D9: and then either EXIT or jump back into the wordprocessor with text files still intact. (AC, AUGUST '93)

IMPORTANT NOTE:

If you'd like to print out any of the documentation text files, make sure your printer is turned on *before* you boot up your computer or it will automatically default to sending docs to the screen.

I'd like to give special THANKS to Clay Halliwell, Bob Scholar, Bill Hanna, Guy Ferrante and last but certainly not least "The 8-Bit Alchemist". Enjoy!! We look forward to next year's submissions, keep 'em coming!

THANKS!

AC's Circulation Editor wishes to convey his deepest gratitude and appreciation to Assistant Disk Distribution Manager Jon Mordosky and all the crew at the Lehigh Valley Atari User Group (LVAUG) for all the grunt labor they performed in the mind-numbing task of stuffing, stamping, and labelling 500 envelopes for AC's subscription renewal notices. They did the job right, and they did it on time.

The total job required about 35 man-hours to produce 19 pounds of ready-to-mail renewal notices. Service in the finest tradition of the Never-Say-Die community of Classic Atari Users...

Ben Poehland, Circulation Editor

The Spotlight: Usergroups in Review

AAAUA (Alamo Area Atari User Association)



ALAMO AREA ATARI
USER ASSOCIATION
P.O. BOX 79-1426
SAN ANTONIO, TX
78279-1426

by JAMES KING, AC Exchange Editor

Vital Statistics

AAAUA (Alamo Area Atari User Association), P.O. Box 79-1426, San Antonio, TX 78279-1426
President: Russell Stowe, voice Phone: (210) 981-2625 [President's number] (210) 344-3522
[Executive Assistant's Number (Thelma Sunvision)]
Meeting Location: Balcones Heights Community Center, 107 Glenarm
Meeting Dates/Times: First Tuesday each month from 7:00pm - 9:30pm

Club History and Activities

This exclusively 8-bit club was formed in 1982. It wasn't always entirely 8-bit, though. In 1988, with the creation of the powerful ST line, STers became disgruntled with attending club meetings in association with mere 8-bitters, so in that fateful year the STers expelled the 8-bit members from AAAUA. In the break-up, the STers were generous enough to split half the treasury, hand over the software library and allow the 8-bit segment to keep the name AAAUA.

Since that time, the members of AAAUA have been on an active recruiting drive to pick up new members. They solicited garage sales and bookstores, distributed flyers, submitted newspaper ads and even canvassed neighborhoods! A dedicated organization indeed!

With a current membership of 42 regular local members and 17 remote subscribing members, AAAUA meetings are busy affairs. Typical activities at any particular club meeting include:

Hardware/software demos

Swap meet

Club disk preparation

Game Contests (patches awarded to winners)

Training classes (help with hard-to-learn programs)

Newsletter editing and preparation (labelling, mailing, etc.).

In addition to actively supporting its own Atari owning members, AAAUA is also active each year in participating in the local Girl Scout Computer Awareness sessions. Computers and demo software are displayed and classes are given on the history of Atari computers.

This Editor gives AAAUA five stars (*****) for excellence in Atari 8-bit support!

[If you have a club you'd like to see reviewed in these pages, please contact the AC Exchange Editor, Jim King, at the address given in the masthead on page 3. My main function here on the Staff of AC is to serve as liason to the usergroup community and maintain a list of current 8-bit support usergroups. I welcome inquiries from readers concerning usergroups and from usergroup representatives who wish to make their presence known to this magazine. -JK]



TREASURE CHEST

by LAWRENCE ESTEP, AC Telecommunications Editor

Welcome to the first installment of a new feature of AC. "Treasure Chest" will highlight some of the classic files available in the file libraries on CompuServe, Delphi, and GENie, and some of the best new uploads as well. This month we'll focus on some great holiday-oriented files in the first of two parts that will let your 8-bit take part in trick-or-treating fun, play a vital role in your Thanksgiving dinner (if things get desperate and you must dish up the CPU, be sure to use extra gravy!!!), spread some yuletide greetings, and count down to the New Year. I hope you'll enjoy this feature, and I look forward to hearing your comments and suggestions of what we might help others find in the online "Treasure Chest"!

Halloween Classic: A "Joey Latimer Classic" from the pages of *Family Computing* magazine. This is a really spooky haunted house in BASIC! Size: 3968 bytes, CIS Library 4: HALCLS.BAS; GENie Library 7, #5561: HALLCLAS.BAS.

Pumpkin: A great jack-o'-lantern without the mess in BASIC. CIS Library 4: PUMKIN.BAS; GENie Library 7, #5541: PUMPKN.BAS.

Cornucopia/Turkey: Two very impressive short BASIC graphics to display on Thanksgiving Day by Joey Latimer of *Family Computing* magazine. Size: 1920 bytes each. CIS Library 4: CORNCP.BAS, TURKEY.BAS.

Many other Halloween and Thanksgiving files can be found by searching the keyword "HALLOWEEN" or "THANKSGIVING" in any of the network libraries.



COMPUSErVE: CONNECTING THE COMMUNICATING COMMUNITY

by LAWRENCE ESTEP, AC TELECOMMUNICATIONS Editor



History In The Making

Little did they know in 1969, when a computer time-sharing service was started, or in 1979 when this time-sharing service entered the online information service industry, that it would grow into a leading worldwide provider of online information services for personal computer users. The company is CompuServe Information Services (CIS) headquartered in Columbus, Ohio USA. CIS can be accessed via a local phone call or gateway network from most U.S. cities and more than 120 countries. An 800 number is also offered for access from remote



Debra Young (Corporate Communications) and Jamie Grove (Customer Service) discuss the busy day ahead at CompuServe's "Mission Control" Customer Service Headquarters.

areas where a local connection may not be available. Members always feel secure in knowing that help is only a phone call or Electronic Mail message away. Over 1600 employees worldwide, including over 175 Customer Service Representatives, are on hand to provide assistance to CompuServe's 1.3 million customers across the globe.

Connecting The 8-Bit Community

Over 350 discussion forums on almost every imaginable topic are available, including an Atari Users Network (GO ATARINET) that contains the Atari 8-bit Forum (ATARI8), an old favorite for the 8-bit community. The forum contains message bases dealing with topics ranging from software/hardware discussions to a Magazine Notes base that allows Atari publications such as AC to provide an easy route for questions and correspondence. Another invaluable feature is the file libraries that contain over 5,000 files. Whether you're looking for a classic from days gone by, or the latest version of your favorite program, this is the place to look.

SysOp Don Lebow, a member the 8-bit Forum staff which also includes Bob Puff (author of BobTerm and other 8-bit programs) keeps the file libraries up-to-date and is always willing to point a user in the right direction. "Unlike a few years ago, if you have a program that's acting up or just want to buy a new piece of equipment or software, finding somewhere to turn isn't easy. I hope we provide that kind of place", muses Don. Another thing that makes the 8-bit Forum a favorite of many users is the "family" atmosphere that permeates the Forum.

Many users who have moved on to other platforms still come back for frequent visits- almost like a family reunion. According to Don, "The neatest thing is to find them coming back, pulling out the system, and getting back to work on it. That speaks highly of the machine itself." I think it also speaks highly of the CIS 8-bit Forum as well.

Another valuable feature for 8-bitters is the newly added Shareware Registration area (GO SWREG). In this area you can register several favorite 8-bit programs including Jeff Potter's APACView and Bob Puff's BobTerm. Also, CompuServe's Internet connection allows access to the Info-Atari8 Digest discussion group, and the most recent Digests are available in the 8-bit file libraries of ATARI8.

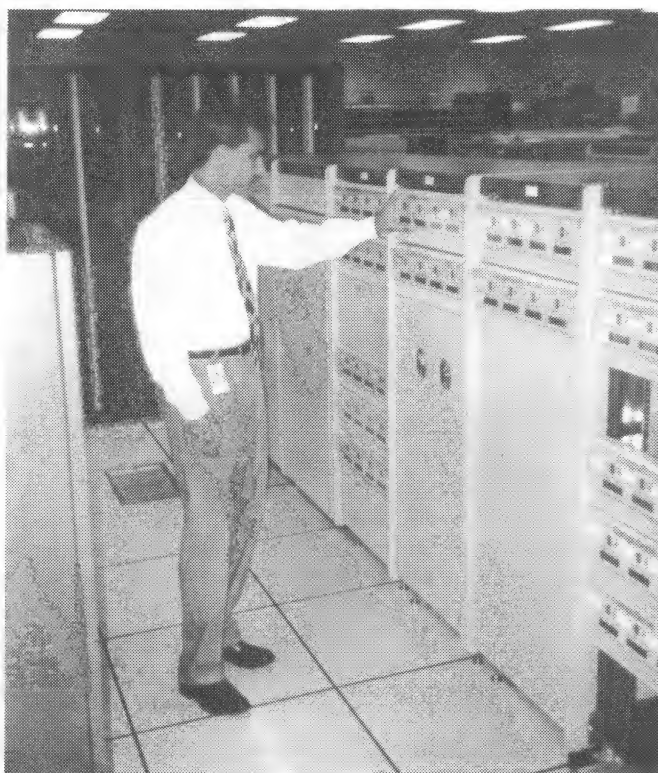
Much More To Offer

CompuServe offers many other things besides the computer and hobby/profession oriented forums. The CB Simulator (GO CB) offers live electronic chat where you can meet new friends or catch up with old ones. Users have an electronic newsroom at their fingertips 24 hours a day with many features such as Asso-

ciated Press Online (GO APO), and National Weather Service reports for around the country (GO WEATHER). Travelling and shopping are quick and easy with the many electronic reservation services (GO TRAVEL) and the Electronic Mall (GO MALL) that contains over 100 merchants. The whole family can enjoy fun and excitement in the games area (GO GAMES) that includes the very popular real-time multi-player trivia game "You Guessed It!" (YGI). CompuServe also offers a wide range of research and reference services from medical information databases to an electronic yellow pages (GO REFERENCE).

CompuServe's Standard Pricing Plan offers unlimited access to many popular "basic services" such as electronic mail, travel, shopping, and games for only \$8.95/month. Other "extended services" such as CompuServe forums are billed in one-minute increments of \$8.00/hour for 1200-2400 baud. For more information or to receive a sign-up package that includes a \$15 extended services usage credit and the first month of basic services for free, call 1-800-524-3388 in the U.S. and ask for Operator #198. Outside the U.S., call 0800 289 378 in the United Kingdom, 0130-3732 in Germany, 155 31 79 in Switzerland, and (614) 457-0802 outside these areas.

[Editor's comment: Whether you subscribe to CompuServe, GEnie, Delphi, Internet, the International Atari Network, or even just a local BBS, I'll reiterate the philosophy here at AC, to wit: "Every 8-bit should have a modem attached!". As small and scattered as our community is, without modems we would all just wither on the vine. National and worldwide networks are a lifeline to other Classic Atari users. This magazine would never have been born, and absolutely could not exist, without telecom networks. Get a modem. Go online. Somewhere, where, just do it! -BP]



Operations Supervisor Mike Merullo checks out one of the mainframe processors at CompuServe's world headquarters in Columbus, Ohio.

Classic In The Classroom

by JOHN C. LAMONTE, AC CONTRIBUTING AUTHOR

Sunnyvale Loses To Apple

Atari blew it when they discontinued the 8-bit. Undoubtedly this observation comes as no big surprise to the subscribers of *Atari Classics*. But I'd like to make it from the vantage point of a veteran educator who daily witnesses the effectiveness of the Atari 8-bit in the classroom.

Years ago the forward-thinking and well capitalized Apple folks gave each school in California one (1) computer. Teachers, pupils, and particularly administrators got used to the Apple IIe. So today Apples abound in instruction. Things needn't have ended up this way if Atari had targeted the educational market. Consider my experience using these wonderful 8-bits as teaching tools.

Kids And The Classic

My 32 upper-graders have access to four 1200XLs. The units are connected to 1025 printers, 1050 disk drives, and 1010 recorders. We also have an 800XL hooked up to an Okimate 10 for color printing with Blazing Paddles. This last machine is patched into the classroom big screen for use in directed instruction and educational games. Of great value in the game mode are the Concentration-like Match-Wits and Missing-Links, which can be tailored to the curriculum.

But it is in word-processing that the Atari 8-bit is unbeatable. Kids love AtariWriter. Rather than being distressed at the absence of 80-columns, they enjoy scrolling around on the 40-column Print Preview screen. Other fea-

tures they obviously appreciate are the automatic caps key and the ease with which blocks of copy are moved.

The big push in the language arts curriculum these day is "keyboarding". All of our fifth-graders are expected to test at about 16 words-per-minute at the end of the year. Most do considerably better than that, thanks to Typo Attack, Kids On Keys, and Mastertype.

And these computers talk to the kids! A year's spelling program has been recorded on the Atari 1010 recorders, and the kids can brush up on their spelling by listening to the list words used in sentences tailored for their classroom. Try that on an Apple!

Closing Comments

These units could have been manufactured and sold profitably by Atari for elementary classrooms all across the nation. Certainly they would not have proved to be as fast or as powerful as the 16-bit STs, but neither would they have been so complicated to use in the upper-elementary environment. Children can readily master the Atari 8-bit and then move on to putting the machine to use. And that's what using a computer is all about at any level of instruction.

The Author: John C. LaMonte, a classroom teacher in Glendale, California for over 20 years, is a member of The Educators' Association of Computer Hackers (TEACH), a predominantly Atari-based club operating out of Laytonville, California.



CYCLOIDS

by THOMAS J. ANDREWS, AC CONTRIBUTING AUTHOR

Spirograph Fancier

As a boy, I was fascinated by Spirograph (tm). My freehand drawing abilities ranged from none to even less, and still do for that matter. The idea of being able to draw pretty designs by merely selecting a couple of gears, putting a pen in a hole, and running one gear around the other was great for a frustrated artist like me. I've never really outgrown it.

When I got older and went to Engineering School, I learned about the mathematic principles behind this toy. Using my new knowledge of polar coordinates and advanced trigonometry, I derived for myself the equations that describe it. It was very gratifying to later find these equations in a mathematics handbook, and to see that while my versions were in a slightly different form, they were correct.

Cycloids and Spirographs

When I started programming the Atari 800, several years later, it seemed only natural to transform my fascination for the Spirograph into a program. While I was at it, I added features that would be impossible for the original toy, but are quite possible mathematically. "Cycloids" is the result.

A cycloid is the general name for the family of equations which describes the movement of a point on a rolling circular object. This program works with two members of that family, where one circle rolls on the surface of another. When the moving circle rolls on the outside of the base, the curve is called an epicycloid. When the mover rolls on the inside of the base circumference, the curve is an endocycloid.

Cycloids and Gears

When using the Cycloids program, you need to imagine two gears. Each gear has exactly the same number of teeth as the size of the radius of the gear, and gears are identified by the total number of teeth on each.

The base gear is always stationary in the center of the screen, and may have its teeth on the inside or outside of its circumference. Available gear sizes range from 10 to 256 teeth.

The moving gear always has its teeth on the outside. There are holes drilled at evenly spaced intervals along the radius of the gear, from the center to the outside edge. These holes are numbered from 0 to the same number as the size of the gear. In addition,

imagine a bar attached to the radius of the gear and extending that radius to four times its length. This bar also has holes drilled in it, evenly spaced at the same interval as those in the gear itself. It is into one of these holes that your pen will be placed for drawing.

Getting Started

Cycloids is very easy to use. You can RUN it from either AtariBASIC or Turbo BASIC XL, although I prefer Turbo BASIC because of the speed. Cycloids can't be used with the Turbo BASIC Compiler.

The program starts with an initialization period, during which a table of sine function values is created. Each point of a cycloid drawing requires the determination of four sine values, and it's much faster to look these up in a table while in the drawing loop than it would be to calculate them.

After the initialization, Cycloids presents you with a blank Graphics 8 screen. A list of commands will appear in the text window. If you want a demonstration of what Cycloids does, just press "N", for NEXT. Cycloids has the necessary parameters for a drawing all loaded. To pause the drawing and restore the command window, press any key at any time.

Command Explanations

Some commands change various parameters. "T" assigns the drawing type, either epicycloid or endocycloid. "G" changes the gears that are to be used. In these and other commands, to keep the same value in effect, just press RETURN with no entry in response to the request for a value.

The type and gear sizes determine the basic shape of the drawing. In every drawing, no matter which type or combination of gears, the pen will eventually return to the starting point, creating a cycle. Each cycle will contain a certain number of lobes. Some are more obvious than others, but they're there. The number of lobes can be determined by the values of the gears. To do this, create a fraction with the value of the moving gear in the numerator and the base in the denominator. Now, reduce this fraction to lowest terms. The denominator of the resulting fraction will contain the number of lobes in a cycle.

For example: $45/105=3/7$ There will be seven lobes in this drawing cycle. Please note that in the above example, moving gears of 15, 30, 60, 75, and 90 will all make seven-lobed cycles when used with

a 105 base. However, each of the drawings would have a different shape.

The command "B" changes the tooth alignment of the gears. Each tooth on the base gear is numbered from 1 to the gear number. When each drawing cycle is started, tooth #1 of the moving gear is aligned with the designated tooth of the base. Tooth #1 of the base always points toward the center right of the screen. Changing the number of the starting tooth has the effect of rotating the position of the drawing cycle on the screen. As an added feature, Cycloids can be set up to increment or decrement the value of the starting tooth between cycles.

"H" changes the hole that the pen is to be put into. In general, cycles using smaller values for the hole will tend to have smoother, more rounded corners. Using hole #0 will always produce a circle. Larger hole values will produce more pointed drawings, and values larger than the gear size may produce loops at the points. Like the starting tooth, the hole number can be set up to change between cycles.

"X" changes the scale of the drawing. This is determined by a combination of two values. The first is the scale factor, and the second is the scale base radius. The scale factor is the number of pixels used to display a radius of a circle the size of the scale base. Thus, if you were to draw a circle of radius 100 using a scale factor of 95 and a scale radius of 100, the circle would be 190 pixels in diameter, or nearly a full screen. To increase the size of a drawing, increase the scale factor or reduce the scale base radius, or both.

The "I" command cycles its way through the T, G, B, H, and X commands, in that order.

More Commands

The rest of the commands are more intuitive and

easier to understand. "RETURN" will resume the drawing where you left off, finishing the current cycle before implementing any changes in parameters you might have made. "N" skips directly to the start of the next cycle. "C" clears the screen. "D" deletes the portion of the drawing done since the last time you saw the command window.

"P" toggles the automatic pause mode. If this is active, the program will return to command mode at the end of each cycle.

"S" saves the current drawing, usually to a disk file. The file created is a simple 62-sector screen dump, without color register information. This file can be used with many graphics programs, including Billboard. Billboard can be used to produce a printed copy of your drawings, in a multitude of sizes.

"L" will load a previously saved file, replacing whatever is on the screen at the time. The "D" command will still restore a former screen, though.

Infinite Possibilities

With a little practice and imagination, you can make thousands of different figures with Cycloids. Through proper use of the commands different designs can be superimposed over or within each other. Other manipulations can create interesting moire patterns through the use of Graphics 8 artifacting.

I couldn't possibly describe all that could be done. I've had hours of fun with Cycloids, both in programming it and using it. I hope you do, too.

[Author's Note: If you have trouble with the DELETE command, try this: LIST the program to disk, type NEW, then ENTER the LISTed file. Finally, SAVE a new copy to disk and RUN Cycloids. Questions? Try me on GENie: J.ANDREWS24.]

```

10 REM CYCLOIDS
20 REM by Thomas J. Andrews
30 REM copyright (c) 1992 Thomas J. Andrews
40 REM
50 REM DO NOT INSERT ANY VARIABLES BEFORE S$ AND OLD$!!!
60 REM
70 CLR :DIM S$(1),OLD$(7681),FN$(25),AN$(10),CMD$(20),SN(628)
80 GOTO 310
90 X=RDIF*SN(CSA)+D*SN(CSB):Y=RDIF*SN(A)+D*SN(BB):POKE 77,ZERO
100 XNEW=INT(XC+X):YNEW=INT(YC-Y)
110 IF EF THEN DRAWTO XNEW,YNEW:GOTO 130
120 EF=WON:PLOT XNEW,YNEW
130 IF PEEK(764)<>255 THEN POKE 764,255:GOTO 420
140 A=A+AINCR:ATOT=ATOT+AINCR:IF A>TWOPI THEN A=A-TWOPI
150 B=B+BINCR:IF B>TWOPI THEN B=B-TWOPI
160 IF B<ZERO THEN B=B+TWOPI
170 BB=INT(B):CSB=BB+XC:IF CSB>TWOPI THEN CSB=CSB-TWOPI
180 CSA=A+XC:IF CSA>TWOPI THEN CSA=CSA-TWOPI
190 IF ATOT<=AMAX THEN 90
200 GOTO 980
210 TRAP 210:EF=ZERO:GOTO 130
220 PRINT " CURRENTLY: ";S:OOPS=ZERO:IF EF THEN RETURN
230 PRINT :PRINT "RETURN=SAME NO. ENTER NUMBER";:INPUT AN$:PRINT :IF AN$=""

```

```

THEN ANS=S:RETURN
240 TRAP 250:ANS=VAL(AN$):RETURN
250 OOPS=WON:PRINT "INVALID INPUT":FOR DELAY=WON TO 100:NEXT DELAY:RETURN
260 VTAB=PEEK(134)+PEEK(135)*C256:ATAB=PEEK(140)+PEEK(141)*C256
270 OFFS=PEEK(88)+PEEK(89)*C256-ATAB
280 HI=INT(OFFS/C256):LO=OFFS-HI*C256:POKE VTAB+TWO,LO:POKE VTAB+3,HI
290 POKE VTAB+4,WON:POKE VTAB+5,30:POKE VTAB+6,WON:POKE VTAB+7,30
300 POKE 752,WON:POKE 710,HUE:POKE 709,LUM:RETURN
310 RESTORE :READ ZERO,WON,TWO,XC,PI,TWOPI,YC,C256:
DATA 0,1,2,159,314,628,95,256
320 HUE=198:LUM=ZERO:POKE 752,WON
330 POKE 710,HUE:POKE 709,LUM:PRINT "}:POSITION 16,5:PRINT "CYCLOIDS"
340 POSITION 19,7:PRINT "by":POSITION 11,9:PRINT "Thomas J. Andrews"
350 POSITION 13,18:PRINT "PLEASE WAIT...":CMD$=CHR$(155):
CMD$(TWO)="NCDPSLTGHBXI"
360 CIO=ADR("hhh*LVd")
370 FOR I=ZERO TO XC:X=SIN(I/100):SN(I)=X:SN(PI-I)=X:SN(PI+I)=-X:
SN(TWOPI-I)=-X:NEXT I
380 READ TYPE,BASE,ROVER,HOLE,HCG,TOOTH,TINCR,SCALE,SCBASE,SINCR
390 DATA 1,144,132,132,-4,1,2,95,144,0
400 CLOSE #TWO:OPEN #TWO,4,ZERO,"K":MF=ZERO:FF=WON:PF=ZERO:MAX=ROVER*4
410 POKE 559,ZERO:GRAPHICS 24:GOSUB 260:CF=WON
420 POKE 559,ZERO:GRAPHICS 40:GOSUB 300:POKE 559,34
430 ? "J":? "COMMANDS: RETURN-CONTINUE"
440 PRINT "N-NEXT C-CLEAR D-DELETE P-PAUSE"
450 PRINT "S-SAVE L-LOAD T-TYPE G-GEARS"
460 PRINT "H-HOLE B-TOOTH X-SCALE I-INIT.:"
470 SOUND ZERO,110,10,10:FOR DELAY=WON TO 50:NEXT DELAY:
SOUND ZERO,ZERO,ZERO,ZERO
480 EF=ZERO:GET #TWO,CM:J=ZERO:FOR I=WON TO LEN(CMD$):
IF CHR$(CM)=CMD$(I,I) THEN J=I
490 NEXT I:IF J=ZERO THEN 470
500 IF J>7 AND J<14 THEN FF=WON
510 IF J=WON AND CF THEN J=TWO
520 PRINT :ON J GOTO 530,530,410,550,560,580,630,660,700,770,830,890,660
530 CF=ZERO:POKE 559,ZERO:GRAPHICS 56:GOSUB 300:POKE 559,34:OLD$=S$:
ON J GOTO 1180,990
540 GOTO 420
550 S$=OLD$:GOTO 430
560 ? :PF=WON-PF:IF NOT PF THEN ? "NO ";
570 ? "PAUSE BETWEEN CYCLES":? :FOR DELAY=WON TO 300:NEXT DELAY:GOTO 430
580 ? "SAVE DRAWING":? :? "Device:Filename?":? "RETURN ABORTS ";INPUT FN$:
IF FN$="" THEN 430
590 CODE1=8:CODE2=ZERO:CMD=11:IF FN$(WON,WON)="C" THEN CODE2=128
600 TRAP 620:OPEN #WON,CODE1,CODE2,FN$:POKE 852,PEEK(88):POKE 853,PEEK(89):POKE
856,ZERO:POKE 857,30
610 POKE 850,CMD:S=USR(CIO,16):CLOSE #WON:GOTO 430
620 ? "JOOPS NUMBER ";PEEK(195):CLOSE #WON:FOR DELAY=WON TO 300:NEXT DELAY:
GOTO 430
630 ? "LOAD DRAWING":? :? "Device:Filename?":? "RETURN ABORTS ";INPUT FN$:
IF FN$="" THEN 430
640 CODE1=4:CODE2=ZERO:CMD=7:IF FN$(WON,WON)="C" THEN CODE2=128
650 GOTO 600
660 S=TYPE:?"DRAWING TYPE? ";EF=WON:GOSUB 220:EF=ZERO
670 ? "1. HYPOCYCLOID (BASE OUTSIDE)":? "2. EPICYCLOID (BASE INSIDE)";
680 GOSUB 230:IF OOPS OR ANS<WON OR ANS>TWO THEN 660
690 TYPE=ANS:IF J<>13 THEN 430
700 S=BASE:?"BASE GEAR RADIUS? (10 TO 256)":GOSUB 220
710 IF OOPS OR ANS<10 OR ANS>C256 THEN 700
720 BASE=ANS:MF=ZERO
730 S=ROVER:?"MOVING GEAR RADIUS? (10 TO 256)":GOSUB 220
740 IF OOPS OR ANS<10 OR ANS>C256 THEN 730
750 ROVER=ANS:MAX=ROVER*4:IF HOLE>MAX THEN HOLE=MAX

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760 IF J<>13 THEN 430
770 S=HOLE:? "HOLE NUMBER? (0 TO ";MAX;")":GOSUB 220
780 IF OOPS OR ANS<ZERO OR ANS>MAX THEN 770
790 HOLE=ANS
800 S=HCG:? "HOLE CHANGE INCREMENT? (-MAX;" TO ";MAX;")":GOSUB 220
810 IF OOPS OR ABS(ANS)>MAX THEN 800
820 HCG=ANS:IF J<>13 THEN 430
830 S=TOOTH:? "STARTING TOOTH? (1 TO ";BASE;")":GOSUB 220
840 IF OOPS OR ANS<WON OR ANS>BASE THEN 830
850 TOOTH=ANS
860 S=TINCR:? "TOOTH CHANGE INCREMENT? (-BASE;" TO ";BASE;")":GOSUB 220
870 IF OOPS OR ABS(ANS)>BASE THEN 860
880 TINCR=ANS:IF J<>13 THEN 430
890 S=SCALE:? "SCALE? (1 TO 256)":GOSUB 220
900 IF OOPS OR ANS<WON OR ANS>C256 THEN 890
910 SCALE=ANS
920 S=SCBASE:? "SCALE BASE RADIUS? (1 TO 256)":GOSUB 220
930 IF OOPS OR ANS<WON OR ANS>C256 THEN 920
940 SCBASE=ANS
950 S=SINCR:? "SCALE CHANGE INCREMENT? (-256 TO 256)":GOSUB 220
960 IF OOPS OR ABS(ANS)>C256 THEN 950
970 SINCR=ANS:GOTO 430
980 IF PF THEN CF=WON:GOTO 420
990 IF FF THEN FF=ZERO:GOTO 1030
1000 EF=ZERO:SCALE=SCALE+SINCR:
IF SCALE<WON OR SCALE>C256 THEN SCALE=SCALE-SINCR
1010 HOLE=HOLE+HCG:IF HOLE<ZERO OR HOLE>MAX THEN HOLE=HOLE-HCG
1020 TOOTH=TOOTH+TINCR:TOOTH=(TOOTH<WON)*(BASE+TOOTH)+(TOOTH>BASE)*
(TOOTH-BASE)+(TOOTH>=WON AND TOOTH<=BASE)*TOOTH
1030 SCF=SCALE/SCBASE:RB=BASE*SCF:RM=ROVER*SCF:RDIF=RB-RM
1040 AINCR=10:IF TYPE=WON THEN AINCR=INT(ROVER/BASE*70):IF AINCR<1 THEN AINCR=1
1050 IF AINCR>70 THEN AINCR=70
1060 BINCR=AINCR*(RM-RB)/RM:ATOT=ZERO:IF BINCR=0 THEN BINCR=AINCR
1070 IF TYPE=TWO THEN RDIF=RB+RM:BINCR=AINCR*RDIF/RM
1080 D=HOLE*SCF:A=INT((TOOTH-WON)*TWOPI/BASE):B=A:IF TYPE=TWO THEN B=B+PI
1090 IF B>TWOPI THEN B=B-TWOPI
1100 BB=INT(B):CSB=BB+XC:IF CSB>TWOPI THEN CSB=CSB-TWOPI
1110 CSA=A+XC:IF CSA>TWOPI THEN CSA=CSA-TWOPI
1120 IF MF THEN 1180
1130 MF=WON:MIN=ROVER*(BASE>ROVER)+BASE*(ROVER>=BASE)
1140 FOR K=MIN TO WON STEP -WON:IF BASE/K<>INT(BASE/K) THEN 1170
1150 IF ROVER/K<>INT(ROVER/K) THEN 1170
1160 AMAX=ROVER/K*TWOPI+30:K=ZERO
1170 NEXT K
1180 COLOR WON:TRAP 210:GOTO 90

```



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ATARI CORPORATION WOOS IBM

The following paragraph was taken from the October 1993 issue of *Electronics Now* (p.6): "IBM In Video Games. A new home video-game system, designed to compete with Nintendo and Sega, as well as the sophisticated new 3DO standard, has been announced by game veteran Atari, which has signed a contract with IBM to manufacture it on a custom basis. The Atari Jaguar system—proudly announced as all American-made—uses a 64-bit RISC processor with 24-bit true-color graphics 'manipulated in a real-time world,' according to Atari. A 32-bit expansion port is to be designed for future connection to cable and telephone networks. It will also play audio CD's, CD Plus Graphics, and Photo CD disks. The game's audio will use 16-bit stereo to permit realistic sound effects as well as human voices. All this is promised for sale starting this fall or winter at a suggested list price of \$200, as opposed to the \$700 price tag on the first 3DO game consoles, made by Panasonic."

Although this announcement earlier this summer brought a brief flurry of excitement and ran Atari's usually-depressed stock up a few points, the overall mood has now settled back to "wait and see". Those of us who've been with Atari since the good ole' 8-bit days have vivid recollections of things like the 1090 and the 1450XLD which were also much bally-hoed, then flopped dead at the market's front door. The Jaguar being "American-made" isn't much of a surprise: IBM long ago sent most of their production jobs to the Far East, and maintenance

costs on their idle U.S. facilities is clobbering their bottom line. Anyone who has followed the fortunes of Big Blue knows they've been on the ropes the past several years. Atari Corp. as a force in the mainstream computer world is something of a joke, not even warranting a footnote on the playing field of Apple vs IBM. So, can two faltering computer companies pull each other out of the muck with a vaporware videogame? We think so. Real soon now.

1993 VAPORWARE AWARD

In the December '92 *AC*, Brad Koda of Best Electronics announced plans to introduce a replacement for the now rare and much-sought ICD R-Time8 cartridge. Recent untoward events in the U.K., where Brad's development work has been slowly grinding down over the past year, suggest it will be quite a long time before this project will once more pick up the critical momentum it needs to hurdle the obstacles to market. In the meantime there have been vague rumors that Computer Software Services may have a similar product on the drawing board, but CSS declined to give specifics. In any event we here at *AC* have pretty much given up seeing an RT8 replacement this year; we added it back to our "Dream Street" list. Of course, if any of our developers should surprise us, and pull out an RT8 in time for, say, Christmas, *AC* will be more than glad to eat crow. Barring that event, *AC*'s 1993 Vaporware Award goes to the phantom R-Time8 Replacement.



DREAM STREET: PRODUCTS We'd Like To See

(Still some good opportunities for hackers, programmers, developers, and entrepreneurs.)

A replacement for ICD's R-Time8 cartridge.

New protocols for BobTerm: KERMIT, ZMODEM, and ANSI; plus a really good VT-100 emulator.

A BobTerm upgrade for expanded RAM machines to permit the storage and recall of up to three previous screens of data while online.

A 24-pin Epson driver for Daisy Dot III with correct aspect ratio.

A serial (SIO) buffer for slow printers like the 1027 and 1025.

A PAL programmer.

An adapter to convert composite video to TTL video (MDA, CGA or VGA).

An 8-bit version of the ST program Aladdin for GENie users.

A high quality electronic schematic drawing program with a 24-pin driver.

A utility for converting Print Shop fonts to Print Power format (see Note below).

A 256K upgrade for the 600XL (perhaps utilizing 44256 DRAMs).

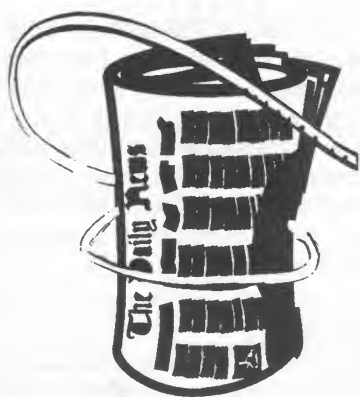
A drawing utility for Print Power.

An IDE hard drive interface.

A patch to AtariWriter+ & -80 to use more than 128K if available, in 16K blocks.

Note: Don Burgess wrote in to say No Frills Software (800 East 23rd St., Kearney NE 68847, phone 308-234-6250) published a program called "The Converter" in 1987 that performs this task. We don't know if No Frills is still in business.

Got an idea for a product? Send it in! If we think it looks good, we'll add it to this list!



News Roundup: Happenings In The 8-Bit World

Compiled by BEN POEHLAND, MANAGING EDITOR

PSIRD GOES PD

Nate Hartwell of Portal Systems Innovations announced on August 28, 1993 that PSI's v2.03 RAM-disk utility (distributed as Shareware on AC's June 1993 Software Disk), has now been released to the Public Domain. The message was posted to the Info-Atari8 Digest on the Internet, and Nate also posted the source code for the program. (We had one report that the MAC/65 portion of the source code was corrupted and couldn't be UUdecoded, unconfirmed.) IT IS NO LONGER NECESSARY FOR AC READERS TO SEND SHAREWARE DONATIONS TO PSI LABS FOR THIS RAMDISK PROGRAM!

GENIE DOES IT AGAIN

From AC's Telecommunications Editor Lawrence Estep comes word of yet another rate change at GENie. GENie recently announced a completely restructured fee schedule that took effect July 1, 1993. Their former Basic Services Plan (\$4.95/month) has been eliminated. Users now receive 4 free hours of standard connect time for a monthly subscription fee of \$8.95/month (Canada \$10.95) with additional hours billed at \$3.00/hour during non Prime Time hours. Internet service is now included in the new fee schedule (under the old plan there were extra charges for messages and hookup). This latest change brings GENie's charges roughly on par with CompuServe's \$8.95/month Standard Pricing Plan that provides unlimited access to Basic Services such as news/weather, e-mail and games, and Extended Services access of \$8.00/hour. It's now pretty tough to tell them apart without your accountant handy.

Our conclusion is that GENie users who only used the free services (such as e-mail) under the old plan will find the new fees a tad steep. But users who frequented the Roundtables or did a lot of file downloads will probably come out ahead. Try calling Genie Client Services toll-free at 1-800-638-9636 for more information.

ICD OFFERS 8-BIT RIGHTS

AC's Managing Editor was startled by a recent phone call out of the blue from Tom Harker, presi-

dent of ICD, Inc., who is seriously interested in locating one or more "sugar-daddies" to buy out ICD's former 8-bit product line.

ICD officially dropped production and support of its 8-bit products (including the OSS product line originated by Bill Wilkinson) in January 1992 (although unofficially we understand they've continued to sell bits and pieces here and there). ICD apparently still has a considerable inventory of parts and manuals on hand that would go to winning bids for related product rights.

If you think you have the business and technical savvy (and the money) to negotiate a deal with ICD and restore one or more of their legendary products to our market, give Tom a call at 815-968-2228, ext. 320.

DISKMAG BITES THE DUST

From Allan Palmer, Mailbag Editor at Page6 Publishing's *New Atari User* in Stafford, England, comes word that Robert Stuart's fine disk magazine *EXCEL* (described by Ed Hall in the February '93 AC) has been discontinued. Back issues are still available through TWAUG (Tyne & Wear Atari User Group), P.O. Box 8 Wallsend, Tyne & Wear NE28 6DQ, ENGLAND.

IBM UPGRADES TO ATARI 8-BIT

If you're an 8-bitter who also happens to own an ST, you'll recall Darek Mihocka's "ST XFormer", an interesting shareware contrivance that emulated an Atari 8-bit with DOS 2.5 on an Atari ST. For those of you who own 386 or 486 IBM-compatibles, Darek is now offering "Gemulator 3.0", which emulates an Atari ST running on the IBM.

So, why is a new program for the IBM being announced in an Atari 8-bit magazine? OK, let's see if we can get this right: first, you run Gemulator on your IBM, which turns your IBM into an ST. Then, you can run ST Xformer 2.31, 2.55 or the new 3.0 version that accompanies Gemulator. This in turn converts the emulated ST into an emulated Atari 8-bit on the IBM! Nested levels of emulation- the concept might twist your brain into a pretzel, but apparently it works. List price \$229 with TOS 2.06 ROMs.

For more info write to: Branch Always Software, 14150 N.E. 20th Street Suite 302, Bellevue WA 98007 USA or send e-mail inquiries to: CIS-73657,2714; GENie- BRASOFT; Delphi- DAREKM.

NEEDED: AN ENTRY LEVEL COMPUTER SYSTEM

By HARRY C. WOHLFERTH, AC CONTRIBUTING AUTHOR

I was late getting a computer because, being a dedicated do-it-yourselfer, I wanted to know what I was getting into. My search led me to believe the computer industry needed better methods of bringing individuals and low-capital companies into the computer age.

The Problem

In my travels to industrial plants I would see a computer with its winking cursor. When I asked what it was used for, in almost all cases someone would take out a disk and boot it up to show me their expensive program. When asked what else it would do, they were at a loss for words because it was usually a dedicated single-program installation. Sort of like buying an individual automobile for each destination.

If an individual tries to buy a computer the first thing a salesman shows the customer is how great a game machine it is. As bad as that is, at least an astute customer can spot the charlatan and run away. But when a business organization goes computer shopping, the shenanigans- and the potential waste- takes a steep rise. The worst mistake they typically make is to hire a consultant. A zillion times, I've thought this is equivalent to walking onto a New York City subway platform with \$100 bills hanging out of your pockets. It's an invitation to be mugged.

Consultants nearly always lead small business clients to a system that's many times more complicated than they need. Running a small business or using a computer for your home business needs is nowhere near as complicated as guiding a shuttle to the moon and doesn't require a megabuck investment. But the neophyte doesn't know that. And to make matters worse for the uninitiated, the biggest problem is that there's no listing of commercial software giving a description of its uses and applications.

The Hardware Solution

I decided that if I was going to purchase a computer, I wanted one that would be useful. Some years ago the president of Avis commented that a computer was a big dumb adding machine typewriter. Today, computers are no longer big. Also, if you're willing to work at it, the price is within the means of everyone. The main thing to remember is that you should be prepared to spend the time necessary to become the computer's boss rather than let it intimidate you. I found the challenge fascinating.

The best advice any dealer gave me when I asked for information about computers was to visit user groups. The Atari user group I visited- which at that time was all 8-bit- impressed me enough so that I bought an 800XL system. Since then I've become a dedicated Classic Atari user.

I have only the basic equipment necessary to do my job. An unmodified 800XL, two XF551 disk drives, a green screen monitor (for someone who is colorblind this is fine), and an NP10 printer.

The Software Solution

The Atari 6502-based computers with 64K or 128K of memory will satisfy the needs of most operations. I very seldom fill up a disk with information. If I do, more disks are always available. *[Editor's comment: This may be true for other types of business operations, but not for running a magazine. Even for a small publication such as this one, stock equipment would never cut it. Nevertheless, by adding on the extra memory and peripherals my job here requires, my 800XL is still the heart and brains of AC's operations. -BP]*

Commercial software which can fit your needs is still usually available (check the ads in this magazine). People experienced with the programs you want to use can nearly always be found in user groups. These people are always glad to furnish guidance and in many instances will also steer you to public domain software to handle your application. Shareware is also a good source of valuable software because it's usually developed by a user who is interested in performance.

Once you get started on a relatively simple computer like the 8-bit and find out how easy it is to operate, more ideas will be developed. The faster computers with more memory that are being hyped now also carry the penalty of having more expensive and more complicated software. I've still never found a good complete list of available commercial software. *[Editor's comment: There probably isn't*

any one software source list for MSDOS machines, as the market is just too vast. For Mac users, however, there's the Macintosh Product Registry, a 450-page quarterly publication that covers over 5,000 Mac products. For Atari 8-bit owners there used to be the very excellent Addison-Wesley Book of Atari Software, last published in 1985. -BP]

Among the many things I can do with my present system (64k 800XL) is write letters, do the monthly report, type mailing labels, print forms, draw graphs of equipment performance, maintain an inventory of equipment and its location, write newsletters, print signs, and prepare slides for presentation.

Software Applications

Atariwriter+ is my standard for letterwriting and producing mailing lists of customers. It was extremely useful in preparing the many revisions I made in this article. On the personal use side, it has been particularly valuable for Christmas letters: I can review the lies I told my friends and relatives last year so I won't contradict myself this year!

SynCalc is the best spreadsheet I've seen. Designing your own charts around this spreadsheet allows you to develop monthly reports, compare contractor bids at a glance and keep track of expenses. On the personal side, you can track your own financial status.

I use B-Graph to make simple comparisons of two or three pieces of equipment under identical sets of circumstances. This is also useful when you want to see how things are progressing around the house. By combining SynCalc and B-Graph I've been able to amaze my doctor by graphing test readings!

Home Management, a database program, can be adapted for a variety of uses. It was originally written as an address book so the user could recall information on any file in memory even if you could only recall one fact about them- which also made it handy as a reverse telephone directory. Since the program doesn't care what's contained in its listing, the location of spare parts or a tickler list for maintenance requirements can be developed. Everyone should have a listing of their personal property and its worth. Home Management is ideal for that purpose.

Newsroom is my program of choice for publishing newsletters and for preparing title slides for presentations. The numerous icons for Newsroom can be added to the original Newsroom icons for an endless supply, and icon disks are readily available from PD distributors.

I like Cardfile for keeping track of my business contacts. My wife also likes it for keeping a file of her favorite recipes. If she happens to drop a recipe in the batter it's no trouble producing another hardcopy.

Endless Uses For The 8-Bit

I combined a number of useful short programs such as label makers, doc readers, biorhythms, disk content labellers, etc. on one disk for rapid use, and I keep that one handy at all times. I've also used the Students T-Test (published on an AIM disk) to determine the difference between two types of medication.

I've used my Atari 800XL for presentations that demonstrated its ease of use and adaptability over more advanced systems. Slides for my presentation were made using a slow speed film in my Canon AE1 camera to photograph the screen. This produced low cost slides that beefed up my presentation. Selling to people who are really interested in using computers for small businesses would be easy if only we had salesmen, dealers and a company that believed in 8-bit systems. A little 8-bit hype could sell a lot of classic computers and standard software to small companies. Every time I use a program for a new application I put a copy in my book of samples to show the adaptability of the system. I show this book the same way I show pictures of the kids.

I still have programs such as Home Accountant, The Bookkeeper, SynStat, SynGraph and SynFile waiting in the wings for the right time to be needed. My neighbor who is an expert told me that only people who realize how much they need what a computer or a program can do will ever be successful users. The bottom line is, if you want to get the most out of a computer system you should keep it simple (KISS), and you have to do it yourself.



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THE FOURTH PASCAL

by JOSEPH R. CHIKO, AC CONTRIBUTING AUTHOR

CLSN: PASCAL Passed Over

In Mark Miller's article "Advanced C Programming On The Atari 8-Bit" (*AC*, February and April '93), he mentioned that he knew of only three versions of Pascal. These included Atari, Kyan and Draper. He was less than complimentary when describing their capabilities and even went so far as to say they weren't much better than BASIC.

I'd like to point out that there is a newer, fourth Pascal language. It is CLSN Pascal. Perhaps after reading this article and you'll have a different opinion of capabilities of Pascal on the Atari 8-bit. I consider my experience a good example of what anyone can accomplish with this language. Since teaching myself Pascal with the aid of CLSN, I've authored more programs in the last two years on my old 130XE than I did in BASIC or Turbo-BASIC in the previous eight years.

A Few Caveats

Before we get into the specifics, I need to mention CLSN's limitations up front. First, the generated object code will only run on a 130XE. Second, since it's the first version, there are some minor-but not insurmountable- bugs in the compiler. C programmers will probably miss the LINKER, which CLSN doesn't use. In addition, CLSN generates machine language instead of p-code, so it doesn't require a separate run time file to execute your program. However, I consider the lack of the last two items an advantage, since this makes CLSN easier to use.

Under The Hood

With these pesky little quirks out of the way, let's get under the hood and check out the engineering of this great little compiler. The reason CLSN only runs on a 130XE is that the compiler, source code, variable name table, and the editor each occupy a 16K bank of memory. This frees main memory for the compiler's generated object code. If the CLSN built-in editor is too limiting, then the word processor or text editor of your choice can be used, provided that individual line lengths don't exceed 128 characters. You may have noticed that line numbers have not been mentioned. You notice I haven't mentioned line numbers? CLSN doesn't use them!

I prefer to use the CLSN editor since it allows me to switch between the compiler, the editor, and the generated object code without exiting to DOS,

unless I over run the 4K stack or heap space. In the "live" environment, the stack and free list share 16K and the heap can occupy up to 48K. But during development the editor, heap, stack, and free list share a single 16K bank of memory.

CLSN isn't case sensitive, and identifiers can be 127 characters in length. Labels can be declared for the dreaded "GOTO" statement. CLSN recognizes CHAR, BOOLEAN, BYTE, SHORTINT, WORD, INTEGER, LONGINT, REAL, STRING, and POINTER types. ARRAYS can be multi-dimensional. SETS are supported as are RECORDS and FILES. In addition, variables can be redefined using the ABSOLUTE clause or defined as residing at a specific location in memory. CLSN also supports a rich set of operators including the DIV, MOD, SHL, SHR, and IN among the less well known.

CLSN Versus Machine Memory

Memory is the only factor limiting the number or type of parameters that can be passed to a procedure or function. Functions can return an ORDINAL, REAL, STRING, or POINTER type. Both procedures and functions can be declared as FORWARD. If the need arises, procedures can be called recursively. The CASE statement is supported and is claimed to be one of the fastest comparisons that CLSN can do. All expressions are completely evaluated (which I prefer), instead of taking the shortcut method. INLINE machine language can be incorporated into the code on those rare occasions where extra speed is needed. Though RECORD types are supported, the WITH statement of Standard Pascal isn't- but I've never missed it.

If the source code exceeds the 16K buffer, CLSN recognizes INCLUDE files. Though this increases compile time, it removes the limitation on the size of the source code file. The use of INCLUDE files can reduce development time, which more than compensates for the longer compile times.

The Docs

The CLSN manual is short but thorough. [Editor's comment: I'm not sure what Mr. Chiko's definition of "short" is. My Version 1.1 CLSN manual, purchased last year from B&C, runs 70 pages. Seemed pretty hefty to me. -BP] It contains a recommended reference reading list, which I found helpful. In addition to the CLSN compiler,

several useful demonstration programs are also included. Unfortunately, CLSN is no longer being supported. However, perhaps with our encouragement and the distribution of software written with CLSN Pascal, the author can be enticed to support this fine piece of software once again.

A Taste Of CLSN

Earlier in this article I mentioned I had written a lot of software. Over the past couple years I wrote 20 games (mostly different versions of solitaire), 2 educational programs, 7 applications, and

3 miscellaneous utilities. Not to mention the dozens of different libraries to make coding easier.

I'm including with this article the most frequently used library in my collection to give you a taste of CLSN Pascal. This library controls all delays in all of my programs. I use this module to control the duration of pulsed tones, the length of time that a message is displayed on the screen, or how much time elapses before checking the joystick ports again. The parameter that is passed to the procedure is a real number representing the number of seconds that the pause should last.

CLSN Demo Delay Routine

```
(* PAUSE.ProcedureLibrary *)
(* PAUSE for the length of time specified by the value of delay.
The maximum duration is 1092 seconds which is 18.2 minutes. *)
PROCEDURE      lsm_pause(      delay      : real);
  TYPE
    clock      = array[0..2] of byte;
  CONST
    jiffy      = 59.92334;
  VAR
    rtclok     : clock absolute 18;      (* real time clock *)
    _rtclok    : clock;                  (* copy of the real time clock *)
    delay_time,
    elapsed_time : word;
  BEGIN (* lsm_pause *)
    (* set the real time clock to 0 *)
    rtclok[0] := $00; rtclok[1] := $00; rtclok[2] := $00;
    if delay > 0 then
      Begin
        (* translate delay in seconds to jiffies *)
        delay_time := turnc(jiffy * delay);
        elapsed_time := 0;
        while delay_time > elapsed_time do
          Begin
            (* make a copy of the real time clock *)
            _rtclok[1] := rtclok[1];
            _rtclok[2] := rtclok[2];
            (* calculate the number of jiffies *)
            elapsed_time := 256 * _rtclok[1] + _rtclok[2];
          End;
        End;
      End; (* lsm_pause *)
```



The Official AC Vendor List, Version 1.0

by R. ROBERT SCHOLAR, AC Advertising Editor

Vendor Vapor

In these volatile times following the contraction of the 8-bit marketplace, there are quite a few lists of Atari vendors floating around on networks, BBSs and such. Nearly all of these lists are contaminated with outdated or erroneous information. Herewith follows AC's first attempt to bring order to the chaos by publishing our own list of 8-bit vendors and product developers. This list is not intended to be all-inclusive. We're aware of the possible existence of quite a few more vendors than are given here. However, our approach is conservative. This list represents only those vendors whose existence we were able to verify personally as of August 1993. We are continuously checking out new leads and information regarding the vendor community and will publish updated versions of this list periodically. Keeping up with the turmoil of the vendor community is a time-consuming, tedious, and expensive undertaking.

The following list was compiled from information furnished by various publications, vendors, and telecommunications services. I've designated each entry as whether it is a Vendor, Developer, or Publisher. The list contains only names of individuals or organizations known to support the Atari 8-bits. If you have questions or additional information to bring to my attention, please write to me at my address in the masthead on page 3 of this magazine, or contact me by e-mail on GENie (R.SCHOLAR) or the Internet (r.scholar@genie.geis.com).

The List!

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Tips 'n' Tricks

PSI RAMdisk Utility

It should go without saying that readers shouldn't try the PSI RAMdisk formatter (from the AC June Software Disk) unless you have a machine with expanded RAM installed. The PSI guys apparently didn't consider the possibility that anyone would try to use the thing on a stock 64K machine. However, your Managing Editor is dumb enough to try anything. Sure enough, if you include the PSI RAMdisk formatter in a SpartaDOS batch file on a non-upgraded machine, your batch file will cease execution when the PSI discovers you don't have any extra RAM for it to format. The PSI message area on your screen will say "RAM-Disk size: 0k", and your keyboard and screen cursor will be dead. You can escape by just hitting RESET, which will dump you into the Sparta command processor.

AtariWriter-80 Auxiliary Menu

It would seem Managing Editors make pretty fair beta-testers. Or perhaps, Alchemists are just extraordinarily prone to stepping in the poo. Whatever, Jeff McWilliams' AtariWriter-80 Auxiliary Menu (see the August AC for his article) which is included on this month's Software Disk, contains a bug. The bug is subtle but highly annoying. When you leave ATW-80 and use Jeff's utility to view the DIRECTORY of any floppy or RAMdisk, if you return to ATW-80 you'll find your text file corrupted (some will be missing and the rest scrambled, even if your text is all contained within a single bank). The erasure/scrambling doesn't occur if you first perform a disk access operation (such as a LOAD or SAVE) from the AtariWriter-80 Main Menu before you boot up Jeff's Auxiliary Menu. While Jeff is puzzling how to fix this little snafu, our advice is to first SAVE your text to a floppy or RAMdisk from ATW-80 before you boot the Auxiliary Menu. Score one for Murphy.

Classic Atari In South America

From Daniel Carrodano in Roquebrune, France, comes an interesting note for Spanish-speaking Atarians. You might want to check out a nifty 40-page monthly magazine published in Santiago, Chile called *STAK Atari* whose content appears to be about 60% 8-bit. The lan-

guage of the magazine is Spanish. Send a postcard to: REVISTA STAK ATARI, Casilla 51552 STGO 1, Correo Central, Santiago de Chile, CHILE for more information. Subscriptions are US\$50 for the magazine only or US\$70 for magazine + disk (airmail prices). Editor Rodrigo Gomez cautions that *STAK Atari* doesn't accept checks or credit cards and advises foreign subscribers to send cash hidden inside a 5-1/4" disk jacket and shipped like an ordinary magnetic disk.

130XE Keyboard Fix

Someone (the many papers in this letter got separated in our office and weren't marked with the sender's name) sent in some mod instructions by Alan Haskel of SPACE (modified by John Nagy?) which claims to fix the occasionally faulty keyboard response of the 130XE, which Alan claims is due to a design flaw that permits insufficient current to flow when a console key is pressed. The fix consists of soldering three 3000-ohm resistors from pins 21, 22, and 23 all to pin 3 (GND) on the keyboard connector J8 on the XE motherboard. Pins are numbered by orienting the bare motherboard so the keyboard connector is in the lower right corner: Pin #1 is on the left. The resistors are installed on the foil side of the board. AC makes no warranties as to either the necessity or validity of this mod, but if you try it and observe improvements in keyboard response, please let us know!

XMM801 RIBBONS

From Roger Cole in Newark, Delaware comes a handy tip for owners of the Atari XMM801 dot-matrix printer. A Mannesman Tally Spirit 80 ribbon fits perfectly and costs about 1/3 of what Roger had to pay Atari for the same thing. Thanks for that one, Roger! Here at AC we're strong believers in second-sourcing replacement items for our equipment. And if you can save money at the same time, that's icing on the cake!

We want bugs! If you have a hot tip on hardware/software usage or an undocumented bug in a program, we want to hear about it! Send your info to AC at our Editorial Office, 179 Sproul Road/Rt. 352, Frazer PA 19355-1958 USA, ATTN: TnT.





A-T-A-R-I



ANSWERS, Tips And Relevant Information

MACROS FOR ATARIWRITER

by PAUL ALHART, AC Staff Columnist

Old Face, New Venue

Welcome to a new column in *Atari Classics*. Those of you who subscribed to the now-defunct *Atari Interface Magazine* will recognize my name and my familiar column containing a pot-pourri of advice on a variety of topics involving Classic Atari software and hardware. With *AIM* now relegated to the realm of recent memory, I'm glad to have an outlet like *AC* to continue my missives on various 8-bit topics. I don't have any particular agenda for this column and will be glad to treat any questions you have as subjects for future articles. In the interim I'll be expounding on subjects I find personally interesting. This month I have a new twist to offer on AtariWriter.

AtariWriter vs. Word Perfect

I've been using AtariWriter and AtariWriter+ for many years. In addition to my magazine articles, I use AtariWriter+ for composing letters, program documentation, and even used it to write my book "The Rana Repair Guide". Not only are its commands intuitively easy to remember, they make sense to me. For this reason, I found it difficult to adapt to Word Perfect on the PC at work. Word Perfect's commands aren't easy to remember, and none of them seem to make any sense.

After several days of frustration with the Word Perfect program and the manual, I discovered the power of Word Perfect's macro function. I wrote a set of macros for Word Perfect that emulate the commands of AtariWriter+. These familiar commands allow me to once again put my concentration on what I'm writing and not on *how* to write it. Over time I've found that macros are also useful for inserting often-used text such as return addresses or hard to spell words. Macros can save time as well as reduce frustration.

Option "L" Macros!

Back at home, I was starting to feel frustrated again. If AtariWriter only had a macro function too, I thought. Well, in a way it does. It's the MERGE function accessed with the OPTION+L key combination. Short text files that can include most screen and printer formatting codes can be saved to disk and MERGED into your document. No longer do I have to type my name and address at the top of business letters and then use PRINT PREVIEW to make sure everything is aligned properly with right justification. Now I just type "(OPTION-L) ADDRESS" and it's all done for me! Another macro selects my printer's downloaded font and signs my letters for me.

Although somewhat limited, these macros can be used to enter text as well as any formatting changes that can be made during text entry. These include such routine functions as setting margins and type fonts, centering text, and most anything that can be accomplished from the Global Format menu of AtariWriter+. CONTROL+O printer commands can also be included. My daughter recently needed to use several characters from our printer's International character set for a Spanish paper. Instead of having to look up the printer codes for these characters every time they're needed, she lets the macros type them for her.

Make Your Own Macros

Here's how to create your own macros to use with the AtariWriter ROMcart, AtariWriter+, or AtariWriter-80. Start by

creating a new file, and type in your macro's text and/or codes. When you get everything formatted the way you want, save this file to your work disk using the SAVE ASCII (CONTROL+S) function. Use a file name that will be easy to remember. Any legal filename will do. It isn't absolutely necessary to use SAVE ASCII, but it will save two single density disk sectors if you do. An ASCII SAVE doesn't save the Global parameters which aren't used by the MERGE function anyway. This method will also allow your macros to be shared between all the different versions of AtariWriter.

Now when you want to call your macro, just type OPTION+L followed by the filename of the macro you want to use. What could be easier? Remember, you can create as many macros as you have room for on your disk. Experiment and come up with your own macros to make your life easier. After all, isn't that what you got your Atari for in the first place?

Applications For AtariWriter Macros

Here are a few macro ideas you might want to try:

- A macro that sets the margins and font for double column printing.
- A macro that includes your name and address, or other letterhead.
- Macros for hard to spell or hard to remember words or names; i.e., macro "BOB" could be Robert Pryzylinski.
- Macros for special printer characters like "1/2" or "1/4".
- Macros to configure your printer for special fonts or type styles.
- Macros to emulate Word Perfect... Just kidding!

Back To The Beginning

A-T-A-R-I began as a monthly newsletter column for my local computer club, The Atari Federation, back in 1986 and also ran in *AIM* for several years. I'm proud that it will now be carried by *AC*. I welcome any and all feedback, questions, or suggestions for future columns.

[Editor's comment: After reading this article I feel like a total wuss. During the 1980's I composed dozens of manuscripts for scientific journals and electronics magazines with AtariWriter, all of which made heavy demands on the special characters accessible in my various Epson printers. Technical writing always requires various Greek characters and odd symbols used in science and mathematics. Accessing these symbols could require up to 20 keystrokes. Did I make macros? Naaahh, it never occurred to me. Instead I painfully typed in each and every one of them individually, including symbols I used over and over. Sheesh! Live and learn... -BP]

About the Author: Paul just completed his 25th year as an electronics technician at Vandenberg Air Force base in California. Starting with an Atari 1200XL in 1983, he now owns nine Classic Atari computer systems. Paul started repairing disk drives for club members in return for help learning programming, and has since written several programs and utilities. A few were published in Antic magazine back in the good old days, and several more appeared on the AIM disk of the month. Paul will be happy to help with any 8-bit hardware/software questions you may have. Write him at: Paul V. Alhart, 524 North Zee St., Lompoc CA 93436 USA.



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MAKE SPELLING FUN on 130XE: spend quality time with your children creating audio spelling lists. My programs allow tape to be replayed. Answers can be typed or written. Programs feature kid-tested prompts & musical rewards. For info send SASE to: J. Chiko, 6914 Bentley, Darien IL 60561.

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WANTED: Two disks published by ANALOG magazine for its "8-Bit Extra" volume (1987). Will buy, swap... whatever! Bob Scholar, 2535 Tamalpais Ave., El Cerrito CA 94530.

SWAP: Have ATR-8000 with two drives, will swap for 1200XLs, 1050 or Indus drives, MPP Micronet, or XEP80. Also seeking any info at all on Andy the Robot from Axlon, please share whatever you know! John LaMonte, 1200 Hill Dr., Los Angeles CA 90041. 213-256-1663.

SELL: CSS "Super Pill" for making backup copies of cartridge-based software to floppy disk. \$20 incl. software & shpg. in continental USA. Not a pirating device, requires special "Pill" cart to run the copied software. Ben Poehland, 179 Sproul Rd./Rt. 352, Frazer PA 19355. Internet: poehland@smithkline.com.

WANTED: Grog's Revenge by Sierra Online, it was a sequel to BC: Quest For Tires. Also seeking info on the Dataphon 21-23d acoustic modem made by Woerltron in Germany. Michael Schoedel, 60 Carrigan Rd., Whitney Point NY 13862. Genie: M.SCHOEDEL. Enterprise BBS: 607-692-2498.

WANTED: Graphics Libraries 2 & 3 for Newsroom. Graphics sheets & disks should be in good condition. Will pay well. I originally bought Library 1 but now can't find the other two since Springboard went out of business. Chris McCoy, 1038 Southport Dr., Medina OH 44256. 216-723-3070.

WANTED: Adaptec 4000 or 4000A controller cards. SCSI half-height 20+meg hard drive(s). Back issues of CURRENT NOTES, pre-1992. Micro-Flyte joystick w/flight simulator pkg(s). Any OS upgrades, Ultra-Speed+ preferred. Seeking Black Box, Multiplexor; double drives: Atari 815 or Astra Big"D". Will buy or swap for items listed in August ad. James King, 4729 South 4180 West, Kearns UT 84118.

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